

Projects for Implementation of the  
Steens Mountain Cooperative Management  
and Protection Act of 2000  
Environmental Assessment

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## TABLE OF CONTENTS

Chapter I. Introduction: Purpose of and Need for Action .....	1
A. Background .....	1
B. Purpose of and Need for Action .....	2
C. Projects .....	3
D. Location .....	3
E. Conformance with BLM Land Use Plan .....	3
Chapter II. Alternatives including the Proposed Action .....	3
A. Off-Site Forage, Water, and Fencing (Map 1) .....	3
1. Ready Pasture Proposed Action and Alternatives .....	4
2. Miners Field Proposed Action and Alternatives .....	6
3. Fields Seeding Proposed Action and Alternatives .....	8
4. O'Keefe Pasture Proposed Action and Alternatives .....	8
5. Other Actions or Alternatives Considered .....	9
B. Fencing and Water Needs Along/Near the No Livestock Grazing Area .....	9
1. Eusabio Ridge Proposed Action and Alternatives .....	10
2. Wildhorse Canyon Proposed Action and Alternatives .....	11
3. Straw Hat Pass Proposed Action and Alternatives .....	11
4. Kiger Gorge Proposed Action and Alternatives .....	12
5. Burnt Car Proposed Action and Alternatives .....	12
6. Bradeen Crossing Proposed Action and Alternatives .....	13
7. Taber Cabin Proposed Action and Alternatives .....	14
C. Fence Removal in Wilderness and Wilderness Study Areas .....	15
D. Livestock Management Projects .....	16
1. South Steens Allotment Proposed Action and Alternatives .....	16
2. East Ridge Allotment Proposed Action and Alternatives .....	17
Chapter III. Affected Environment .....	18
A. Critical Elements .....	20
1. Areas of Critical Environmental Concern .....	20
2. Cultural Resources .....	20
3. Floodplains .....	20
4. Migratory Birds .....	21
5. Noxious Weeds .....	21

6.	Special Status Species - Fauna .....	21
7.	Special Status Species - Flora .....	21
8.	Water Quality .....	21
9.	Wetland and Riparian Zones .....	22
10.	Wild and Scenic Rivers .....	22
11.	Wilderness and Wilderness Study Areas .....	22
B.	Noncritical Elements .....	23
1.	Wild Horses .....	23
2.	Wildlife .....	23
3.	Livestock Management .....	23
4.	Vegetation .....	23
5.	Soils .....	24
6.	Visual Resources .....	24
7.	Recreation .....	24
Chapter IV. Environmental Consequences/Mitigation .....		24
A.	Critical Elements .....	24
1.	Areas of Critical Environmental Concern .....	24
2.	Cultural Resources .....	25
3.	Floodplains .....	25
4.	Migratory Birds .....	27
5.	Noxious Weeds .....	32
6.	Special Status Species - Fauna .....	34
7.	Special Status Species - Flora .....	38
8.	Water Quality .....	39
9.	Wetland and Riparian Zones .....	40
10.	Wild and Scenic Rivers .....	43
11.	Wilderness and Wilderness Study Areas .....	46
B.	Noncritical Elements .....	51
1.	Wild Horses .....	51
2.	Wildlife .....	54
3.	Livestock Management .....	59
4.	Vegetation .....	64
5.	Soils .....	69
6.	Visual Resources .....	71
7.	Recreation .....	76
C.	Reasonably Foreseeable Future Actions .....	77

Chapter V. Cumulative Impacts .....	77
A. Critical Elements .....	77
1. Areas of Critical Environmental Concern .....	78
2. Cultural Resources .....	78
3. Floodplains .....	78
4. Migratory Birds .....	78
5. Noxious Weeds .....	78
6. Special Status Species - Fauna .....	78
7. Special Status Species - Flora .....	78
8. Water Quality .....	79
9. Wetland and Riparian Zones .....	79
10. Wild and Scenic Rivers .....	79
11. Wilderness and Wilderness Study Areas .....	79
B. Noncritical Elements .....	80
1. Wild Horses .....	80
2. Wildlife .....	80
3. Livestock Management .....	80
4. Vegetation .....	80
5. Soils .....	81
6. Visual Resources .....	81
7. Recreation .....	81
Chapter VI. Consultation and Coordination .....	81
Chapter VII. List of Preparers .....	82
Appendix A .....	83
Appendix B .....	84
Appendix C .....	85
Appendix D .....	86
Appendix E .....	87
Appendix F .....	92

## CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

### A. Background

On October 30, 2000, the Steens Mountain Cooperative Management and Protection Act of 2000 (Act) (Public Law 106-399) was signed into law. Several of the purposes of the Act [Section 1(b)] include maintaining the cultural, economic, ecological, and social health of the Steens Mountain Area; designating the Steens Mountain Wilderness Area and the Steens Mountain Cooperative Management and Protection Area (CMPA); providing for and expanding cooperative management activities between public and private landowners in the vicinity of the Wilderness Area and surrounding land; maintaining and enhancing cooperative and innovative management practices between the public and private land managers in the CMPA promoting viable and sustainable grazing operations on private and public lands; and conserving, protecting, and managing for healthy watersheds and the long-term ecological integrity of Steens Mountain. The Act authorizes only uses on Federal land in the CMPA that are consistent with the purposes of the Act. The purpose of the CMPA [Section 102(a)] ". . . is to conserve, protect and manage the long-term ecological integrity of Steens Mountain for future and present generations." One of the objectives [Section 102(b)] is "... to maintain and enhance the cooperative and innovative management projects, programs and agreements between tribal, public and private interests in the Cooperative Management and Protection Area, ... to promote grazing, recreation, historic, and other uses that are sustainable;...." The Act designates a wilderness area and establishes a "no livestock grazing area" within the wilderness. In Section 113(e)(2), the Act discusses cancellation of grazing permits within the "no livestock grazing area" and directs the Secretary of the Interior to "...be responsible for installing and maintaining any fencing required for resource protection within the designated no livestock grazing area." Section 113(e)(3)-(4) speaks to replacement forage for displaced livestock, and for the construction of fencing, and water systems "...as necessary to allow for reasonable and efficient livestock use of the (replacement) forage resources.... " Subsection (f) allows for construction of facilities within the CMPA, if the "...Secretary determines that the structure...will be minimal in nature; ...is consistent with the purposes of this Act; and ...is necessary... for the management of livestock...."

B. Purpose of and Need for Action

Based on language found in the Act, the purpose of this action is to implement the "no livestock grazing area," install and maintain fencing required for resource protection within this area, provide replacement forage within and outside the CMPA, and construct fencing and water systems to allow for viable livestock operations and sustainable livestock grazing which promotes the long-term ecological integrity within the CMPA and meets the Standards for Rangeland Health and the Guidelines for Livestock Management. The need for this action is to conform with the directives of the Act, thereby ensuring the long-term ecological integrity of the CMPA. The need for the replacement forage described in the Act is due to the exchange between Roaring Springs Ranch, Inc., and the Bureau of Land Management (BLM) and the designation of a portion of the South Steens Allotment, in which Roaring Springs Ranch, Inc., is the grazing permittee, as part of the no livestock grazing area. In the exchange, most of the public land in the Long Hollow Pasture of the Fields Basin Allotment, would become Roaring Springs Ranch, Inc., private land. The current grazing permittees in that allotment would lose their grazing preference in that pasture and would need to be moved somewhere else to satisfy their grazing permit. In the Act, their preference is moved to the O'Keefe Pasture of the Miners Field Allotment. Some replacement forage for Roaring Springs Ranch, Inc., is also provided in the Bone Creek and Miners Field Pastures of the Miners Field Allotment.

The need for this action is that the acreages of both the South Steens and the East Ridge Allotments would be reduced due to the creation of the no livestock grazing area. The South Steens Allotment would lose about 42,000 acres and the East Ridge Allotment would lose about 3,890 acres. This reduced land base in these allotments requires basic structures such as fences and additional water sources to be able to adjust the timing of livestock use, provide rest from grazing, and control livestock distribution which, in turn, relates to sound ecological management of the resources. This also conforms with the purposes of the Act by maintaining the cultural, economic, ecological, and social health of the Steens Mountain Area; providing for and expanding cooperative management activities between public and private landowners in the vicinity of the Wilderness Area and surrounding land; maintaining and enhancing cooperative and innovative management practices between the public and private land managers in the CMPA; promoting viable and sustainable grazing operations on private and public lands; and conserving, protecting, and managing for healthy watersheds and the long-term ecological integrity of Steens Mountain.

C. Projects

The proposed projects include construction of approximately 25 miles of new fence, 4 cattleguards, drilling of 2 wells, installing approximately 13 miles of pipeline with 13 water troughs, constructing 8 new waterholes, developing 3 springs and conducting maintenance on 2 additional springs. Proposed locations of these projects are on Map 5. Also proposed is removal of approximately 55 miles of unnecessary fence which exists throughout the no livestock grazing area, other parts of the wilderness area, the Blitzen River Wilderness Study Area (WSA), and other WSAs. This fence removal will be discussed as part of the proposed action.

D. Location

The project area is in Harney County in southeastern Oregon. It includes the Steens Mountain, about 60 miles southeast of Burns, Oregon; and the area of Fields, Oregon, about 90 miles southeast of Burns. The general legal descriptions for the projects are listed in Appendix A and general locations can be seen on the attached maps.

E. Conformance with BLM Land Use Plan

All of the proposed actions are in conformance with the Steens Mountain Cooperative Management and Protection Act of 2000 (P.L. 106-399, 10/30/00), as directed in the various sections previously cited. Those projects not directly referred to in the Act are in conformance with the Andrews Management Framework Plan, 1982, and the Andrews Rangeland Program Summary Update, 1984.

## CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

The proposed project locations as shown on the maps are approximate. Site determinations for well locations and other projects may be adjusted by the BLM in the field.

A. Off-Site Forage, Water and Fencing (Map 1)

Table 1. Off-Site Forage, Water and Fencing Needs - Section 113(e)(3)-(4) of the Act

Allotment/ Pasture	Fences	Cattleguards	Well	Pipeline	Troughs	Waterholes	Springs
Ready Pasture	1.5 miles*	2	1	4 miles	2-16' bottomless 1 aluminum		

Allotment/ Pasture	Fences	Cattleguards	Well	Pipeline	Troughs	Waterholes	Springs
Miners Field	5.5 miles	1				2	1(maintenance)
Fields Seeding				3 miles	3 aluminum		
O'Keefe Pasture			1	4 miles	2-30' bottomless 1 aluminum		

\*Mileage figures for fence projects are approximate.

# 1. Ready Pasture Proposed Action and Alternatives

## **Proposed Action:** Upper Bone Creek Gap Fence

The Bone Creek Gap Fence, approximately 0.5-mile long, would be located in the Bone Creek drainage about 0.25-mile above where Bone Creek exits the canyon. The exact placement of the fence may vary from the location shown on Map 1, but would be within the wilderness area. The fence would be a 3-wire, metal post fence with the bottom wire smooth and the other two wires barbed. The wire spacings would be 20 inches, 35 inches, and 39 inches aboveground to allow bighorn sheep, mule deer, and pronghorn passage. Flagging would be put on new fences for a period of 1 to 2 years to aid recognition by wildlife. The final location would serve to keep livestock in the Ready Pasture from accessing the upper part of Bone Creek Pasture, as directed by the Act.

## **Alternative:** Lower Bone Creek Gap Fence

The placement of the fence would be near the mouth of the Bone Creek drainage but would be wholly or partially in the wilderness area to keep livestock in the Ready Pasture. Fence construction specification would be the same as the proposed action.

## **Proposed Action:** Ready Cattleguard

A cattleguard would be placed on the Fields-Folly Farm Road at the north end of this pasture.



**Proposed Action: Fields Fence and Cattleguard**

The Fields Fence, about 0.75-mile long, would be located on the north and west sides of the private property in the Fields town site. This fence would be a 4-wire metal post fence with standard wire spacing (16 inches, 22 inches, 30 inches, and 42 inches aboveground). The top three wires would be barbed and the bottom wire would be smooth. There would also be a new cattleguard where this fence crosses the main road just north of Fields.

**Alternative: Fields Fence and Painted Cattleguard**

The Fields Fence would be constructed as described above. A painted cattleguard will be constructed in place of the steel cattleguard at the same location as described above. If, in the future, this cattleguard is found to not be effective then a steel cattleguard will be installed at the same location.

**Proposed Action: Ready Pasture Well and Pipeline**

One well, with about 4 miles of pipeline, two 16-foot bottomless water troughs, and one 8-foot aluminum water trough are proposed for the Ready Pasture. The pipeline would be located on the east side of the Fields-Folly Farm Road and run parallel to the road. The bottomless troughs would be at either end of the pipeline and the aluminum trough at the well site. Surface disturbance would occur from vehicles driving cross-country to access the well site during drilling operations and to install power from an existing power line to the well site. The well casing would rise above the ground level about 18 inches and have a red sanitary cap placed on top. A power pole would be placed near the well and, depending on the distance from the existing power line to the well site, another pole might be necessary. A Right-of-Way (ROW) for the line would be issued to the power company for this access.

The pipeline would be constructed by a bulldozer with a ripper tooth digging the trench, 24 to 30 inches deep, for the pipeline on the first pass.

The pipe would be laid in the trench on the second pass; then, rocks and soil would cover it up. Rehabilitation of the pipeline trench would be through seeding with native seed or crested wheatgrass seed, where appropriate. Some ground disturbance would occur from vehicles driving cross-country for access to the bottomless trough locations in order to level the sites so the concrete base could be poured. A 16-foot metal ring, approximately 2 feet deep, would be attached on top of, and sealed to, the concrete base. Float valves would be put on all water troughs to keep them from overflowing. All troughs would be fitted with wildlife escape ramps, floating platforms or piles of rocks to allow small wildlife an escape route if trapped in the trough. Similar escape ramps and float valves would be common to all proposed water troughs.

**Alternative:** Burke Springs Pipeline Extension

This alternative would be to extend the Burke Springs pipeline through the Schouver Flat Seeding for a distance of approximately one-half mile, pass the pipeline extension under the road and extend the pipeline approximately one-half mile into the Ready Pasture and place a trough at this location. The trough location is approximately where the well site is in the proposed action.

2. Miners Field Proposed Action and Alternatives

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance

In the Miners Field Pasture, the proposal is to construct 5.5 miles of fence, two waterholes, and conduct maintenance on one spring. The fence would be along the road ROW to the north of the Long Hollow Road. When the fence route reaches the Fields-Folly Farm Road, it would be built on the west side of the Fields Community Pit and would stay approximately 300 yards west of the Fields-Folly Farm Road. At the north end of this proposed fence route, it encounters private land. It would be routed to the west around the private land and connect in with the Schouver Flat Seeding Fence. This new fence would be barbed wire for the two top wires with a smooth bottom wire and built to specifications for bighorn sheep, mule deer, and pronghorn passage as previously stated. A cattleguard would be placed across the road at the west end of this fence near the east end of the private land.

Two waterholes, Miners Waterhole 1 and Miners Waterhole 2, would be constructed in drainages on the north side of the Long Hollow Road on either side of the summit. A bulldozer would be used to construct the dams. The tracks of the bulldozer would create some surface disturbance when being driven into and out of these sites. The main surface disturbance would be at the pond areas and at the dam sites when the bulldozer is pushing dirt and rocks to form the dams. These waterholes would be less than nine acre-feet each and would be outside the wilderness area.

One spring, which is in the wilderness area, requires maintenance. This would consist of digging out and resetting the headbox to allow water to flow to the existing trough. Methods for this maintenance would have to meet minimum tool analysis requirements (Appendix E).

#### **Alternative 1: Miners Field Fence ROW**

This alternative, which is about the same length as the proposed action, would route the fence to the east when it reached the private land, then run along the road ROW to the Schouver Flat Seeding Fence. The construction specifications would be the same as the proposed action. The cattleguard, waterholes, and spring maintenance would be as described in the proposed action.

#### **Alternative 2: Miners Field South Fence**

This alternative is a shorter fence project. The new fence would be about 2.5 miles long, instead of approximately 5 miles for the proposed action. It would connect with the proposed Fields Fence on the north side of Fields, Oregon, and run north along the west side and then west along the south side of the main highway. Once the fenceline reaches private land, it would be routed south and west and tie into an existing fence. The waterholes and spring maintenance would be as described in the proposed action. No cattleguard would be required.

3. Fields Seeding Proposed Action and Alternatives

**Proposed Action:** Fields Seeding Pipeline

In the Fields Seeding, a pipeline about 3 miles long would be constructed from the existing well at the BLM administrative site, to the west about 1-mile to a high point and new storage tank. From that point, the pipeline would go north and south with two aluminum troughs placed at each end of the pipeline. From the tank, one section of pipeline would extend northeast into the part of Ready Pasture just north of Fields, and an aluminum trough placed at the end of this section. The description of laying the pipeline would be the same as described for the pipeline in the Ready Pasture. Since the well already exists, no further disturbance from any other construction would be required.

4. O'Keefe Pasture Proposed Action and Alternatives

**Proposed Action:** O'Keefe Well and Pipeline

In the O'Keefe Pasture, the proposal is to drill a well, place a pipeline about 4 miles long with 30-foot bottomless troughs at each end and one aluminum trough at the well. A two-track road would be needed to access the well site but no associated ROW for power would be needed as this well and pump would be powered by a diesel or propane generator. The actions for this project would be the same as in the Ready Pasture for the well casing, laying the pipeline, and setting the bottomless troughs.

**Alternative:** O'Keefe Well and Pipeline with Fields Seeding Extension

The O'Keefe Well and Pipeline would extend into Fields Seeding and the south end of the Ready Pasture. This would extend the O'Keefe Pipeline by 2.5 miles but would reduce the combined total of pipeline needed for O'Keefe and Fields Seeding Pipelines by about 1-mile. This project would have the same amount of troughs as in the O'Keefe and Fields Seeding Proposed Actions. The storage tank described in the Fields Seeding Proposed Action would not be needed. The actions required would be the same as described above for laying pipeline.

## 5. Other Actions or Alternatives Considered

Other actions or alternatives that were considered but were not analyzed further include the construction of waterholes or the development of existing springs instead of drilling wells and installing pipelines in the O'Keefe Pasture, Fields Seeding, and Ready Pasture. It was determined that waterholes were not a reliable source of water, especially in the lower elevations of these pastures. The topography in much of the Ready Pasture is flat with few drainages that have enough runoff to be a reliable water source for livestock. There are only two springs and neither flows enough to supply the water needed for livestock. Because these alternatives do not conform with the intent of the Act to provide for sustainable livestock use, they were not analyzed further.

The No Action Alternative was considered but not further analyzed since the Act directs these projects to be constructed and allows for discretion only in how, where or what materials are used in the project design and construction.

### B. Fencing and Water Needs Along/Near the No Livestock Grazing Area

Table 2. Fencing and Water Needs Along/Near the No Livestock Grazing Area - Section 113(e)(2) of the Act

Location	Fences (# of proposed action/alternatives)	Springs	Pipeline	Troughs	Waterholes
Eusabio Ridge	7 miles* (3)				
Wildhorse Canyon	2 miles (2)				
Straw Hat Pass	1-4 miles (2)				
Kiger Gorge	1.5 miles(1)				
Burnt Car	0.5 mile(1)	1 (redevelop)	0.25-mile	1	
Bradeen Crossing	0.25-2 miles(2)				1
Taber Cabin					1-4

\*Mileage figures for fence projects are approximate.

1. Eusabio Ridge Proposed Action and Alternatives

The following items would be common to the proposed action and all alternatives. The last 100 to 200 yards of each fencing alternative to its termination on the east rim would be a rock fence constructed of local materials to facilitate bighorn sheep movements along the east rim of Steens Mountain. Other parts of the fence would be a 4-wire design with the top three wires barbed and the bottom wire smooth. Wire spacing specifications within 2 miles of the east rim would be for bighorn, mule deer, and pronghorn passage (16 inches, 20 inches, 35 inches, 39 inches aboveground). Wire spacing specifications for other portions of this fence would be for mule deer and pronghorn passage as discussed previously for the Fields Fence. An easement for where the fenceline would cross private land would need to be acquired from the private landowner since BLM has maintenance responsibilities. Other options for fence design would include a wood post or split rail weave pattern that may withstand heavy snow conditions better than a barbed wire fence. Access to this site for transport of materials and construction would be across the private land to the south with private landowner's permission. Materials would be flown into the sites in the wilderness.

**Proposed Action:** Eusabio Ridge Fence

The fenceline along Eusabio Ridge would have two sections (Map 2). One would be along the private/public land boundary from the Donner und Blitzen River on the west, extending east about 1.25 miles, then north about 0.25 to 0.50-mile, then east again for about 0.75-mile. The other section would be about 5 miles long and may be built mostly on private land. The easternmost 1 to 2 miles would be on public land and would have three possible routes. The proposed action would be to continue to follow the topography out to the east rim of the Steens Mountain. This would be about 1.5 miles long and would be in the wilderness area.

**Alternative 1:** No Livestock Boundary

This alternative route would be about 1.75-miles long and would be along the no livestock grazing boundary out to the rim and then along the rim for about 0.5-mile. This fence would also be in the wilderness area.

## **Alternative 2: Private/Public Boundary**

This fence route would be about 3-miles long and run to the south along the new private/public land boundary, outside the wilderness area until the last 100-200 yards, which would be a rock fence that would run perpendicular to the rim.

### **2. Wildhorse Canyon Proposed Action and Alternatives**

#### **Proposed Action: Wildhorse Lower Fence**

This proposed fence (Map 2) would be the reconstruction of about 1.5 miles of an existing, dilapidated fenceline. A small spur off this fenceline would be run uphill to the northeast, to ensure livestock would not be able to access Wildhorse Canyon from the east. The fence would not be built to the top of the rim on either side but only go as high as necessary to keep livestock from gaining access to the no livestock grazing area. It would be a 3-wire fence with the bottom wire smooth and the other two barbed with spacing for bighorn sheep, mule deer, and pronghorn passage. Access to this site would probably be across private land with the owner's permission. This fence site would be in the wilderness area.

#### **Alternative: Wildhorse Upper Fence**

This alternative would be to construct a fence about 1-mile in length, across the mouth of Wildhorse Canyon along the no livestock grazing boundary which is in the wilderness area. This fence would be up canyon, from the proposed action, as well as shorter. However, access to build the fence would be more difficult because it would be by foot or by horse and materials would either be flown into the site or carried in on horseback. This fence would be built to bighorn, mule deer, and pronghorn specifications.

### **3. Straw Hat Pass Proposed Action and Alternatives**

#### **Proposed Action: Straw Hat Gap Fences**

There are two options for fencing at this location (see Map 2). The proposed action would be to build two gap fences about 1-mile long total that would keep livestock from accessing upper Wildhorse Canyon.

These gap fences would be in the wilderness and are also inside the no livestock grazing boundary. These two fences would either be a 3-wire barbed wire/smooth wire combination built to specifications for bighorn sheep and mule deer or rock fences constructed with local material. Access to these sites would be on foot or on horse and materials would either be flown or carried in on horseback.

**Alternative:** Straw Hat No Livestock Grazing Boundary

This alternative would be to build 4 miles of fence in the wilderness along the no livestock grazing boundary. Access and fence specifications would be as described above for the proposed action.

4. Kiger Gorge Proposed Action and Alternatives

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence

Approximately 1 to 1.5 miles of fence would need to be constructed on public and possibly private land for this proposed action (see Map 3). This would be partially inside the wilderness. The design would be a wood post weave pattern for its entire length across the canyon except across Kiger Creek where swing panels would be installed. These panels would be suspended over the creek and would allow water to flow unrestricted in the stream channel while controlling livestock movements. These panels would be made from aluminum and would be painted to blend in with fence materials. All materials would have to be airlifted to the fence site as there is no access by motor vehicle.

**Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

An alternate design would be to construct this fence as a letdown, barbed wire fence that would be put up in the spring before livestock entered the pasture down canyon from the fence and would be letdown when all the livestock were removed. Wire spacings for this fence would be the standard spacing as discussed previously with the bottom wire smooth. Materials would be airlifted in as in the proposed action.

5. Burnt Car Proposed Action and Alternatives

There are two springs near Burnt Car, one of which is in the wilderness, Wild and Scenic River corridor, and the no livestock grazing area. The other spring is outside this area but still within the Blitzen River WSA.



Without protection, these two springs would continue to be grazed by livestock and wild horses. An old cement structure, possibly an old sheep dip tank, is near the latter spring.

**Proposed Action:** Burnt Car Gap Fences and Water Development

The proposed action would be to put in two gap fences about 0.25-mile long each, near or along the no livestock grazing boundary. The spring in the Blitzen River WSA would have an enclosure fence constructed around it, and using the old tank to collect water, pipe it to a trough and/or waterhole in the WSA. This would take about 0.25-mile of pipeline and one trough. The gap fences would exclude livestock and wild horses from the no livestock grazing area but would still provide water for both. The trough would have small wildlife escape structures and a float valve so water would continue to flow at the spring source when not needed at the trough. The waterhole would allow wild horses better access to water than the trough. If just the waterhole was constructed, water would flow continually from the spring source. The project would be in both wilderness and WSA. Methods for constructing the pipeline and waterhole would have to be determined by minimum tool analysis. There is a road to this area so personnel could access the site and materials could be brought to the site.

**Alternative 1:** Gap Fences

This alternative would be to build the two gap fences as in the proposed action with no water development. The spring located outside the no livestock grazing boundary would be available for wild horse and livestock watering.

**Alternative 2:** No Action

This alternative would leave things as they are which would still allow livestock to graze and water at both spring sources.

6. Bradeen Crossing Proposed Action and Alternatives

**Proposed Action:** Gap Fences and Waterhole

A livestock crossing and water gap from both sides of the Blitzen River exists at this location. The proposed action would be to construct two small gap fences on the west side of the river where livestock have access.

These fences would be short, less than 0.25-mile each, but would be located in the no graze area, Wild and Scenic River corridor, and wilderness area. A waterhole is proposed to be constructed about 3 miles west of Bradeen Crossing near the Weaver place, to replace the lost water source at Bradeen Crossing. The construction would be similar to that described for the waterholes in Miners Field. There is an existing two-track road into this site which would be in the South Fork Donner und Blitzen WSA.

**Alternative:** No Livestock Grazing Boundary Fence, Cattleguard and Waterhole

An alternative would be to construct fence along the no livestock grazing and wilderness boundary which would take about 2 miles of fence and a cattleguard along the southern section of the back country byway. This fence would be partially in the wilderness area and the Blitzen River and South Fork Donner und Blitzen WSAs. The Weaver place waterhole would be part of this proposal as well.

7. Taber Cabin Proposed Action and Alternatives

**Proposed Action:** Waterhole Construction

On completion of a land exchange mandated by the Act, the private land around Taber Cabin will become public. There is a water gap in the Blitzen Protection Fence on this land which is within the no livestock grazing area, Wild and Scenic River corridor, and wilderness area. Access would be closed off to livestock and wild horses by removing the gap fence from the existing fence. With water lacking in this area, up to four waterholes are proposed to be constructed outside the no livestock grazing area on what is now private land. Once the land exchange is complete, this site would become part of the South Fork Donner und Blitzen WSA. Construction of the waterholes would be similar to that described for waterholes in Miners Field.

**Alternative:** No Waterhole Construction

An alternative would be to close the water gap and not construct the waterholes.

C. Fence Removal in Wilderness and WSAs

Approximately 55 miles of interior fences have been identified to be removed from the new wilderness area. Several miles of old, nonfunctional fences still exist in both the new wilderness area and the Blitzen River WSA in the South Steens Allotment that would be removed as well. Other nonfunctional fences would be removed from the wilderness area and the WSAs as identified. The methods for fence removal will undergo a Minimum Tool Analysis determination to decide the least intrusive method(s) to be used. Things common to all alternatives in this process would be that wire from the fence would be rolled by hand, all metal fenceposts would be removed, wood posts and braces may be removed or left to decompose, rocks from rock cribs would be scattered over the landscape, and all woven wire used for rock cribs would be removed.

**Proposed Action:** Helicopter Use

The proposed action would include use of a helicopter to transport personnel to and from sites as well as dropping wooden pallets or heavy duty tarps for stacking or piling materials. The helicopter would then be used to transport the fence materials on the pallets or tarps to a drop point on a road where the materials could be hauled away. An option would be for the workers to hike into the areas identified for fence removal and have the helicopter drop the pallets or tarps and then return when the pallets are full of materials.

**Alternative 1:** Full Mechanized Removal

Vehicles (All-Terrain Vehicles (ATVs), pickup trucks) would be allowed to use existing roads and trails in the wilderness to access fence removal sites. When materials had been gathered to collection points along the fenceline, vehicles would be allowed one pass to collect materials until full. All other materials not collected would be flown out by helicopter.

**Alternative 2:** Pack Horse Use

This alternative would accomplish the fence removal with nonmotorized means. A pack string would be used to move materials to collections sites outside of the wilderness where vehicles would haul it away. Crews would either hike or ride horses to the project sites.

## Other Alternatives Considered but not Analyzed

The No Action Alternative was considered but not analyzed further since most fences in the interior of the no livestock grazing area would serve no purpose once the livestock were removed and excluded. Only the fence that is part of the boundary for the South Steens Wild Horse Herd Management Area (HMA) needs to remain.

### D. Livestock Management Projects

Table 3. Livestock Management Projects - Sections 102(a), (b)(2) and 113(f)(1), (2) and (3)(C) of the Act

Allotment	Fences	Cattleguards	Spring Development	Pipeline	Troughs	Waterholes
South Steens	3 miles*	1				1
East Ridge	2 miles		3	1-mile	3	

\*Mileage figures for fence projects are approximate.

#### 1. South Steens Allotment Proposed Action and Alternatives

##### **Proposed Action:** Tombstone Drift Fence RMP Analysis

The proposed action would extend the temporary status of the Tombstone Drift Fence until livestock management issues are addressed in the proposed Andrews Resource Management Plan (RMP). This plan is scheduled for completion by October 2004.

##### **Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

This alternative (Map 4) is composed of two projects, the second of which is contingent on the first action taking place. The first project would be to make the temporary Tombstone Drift Fence permanent. This fence was constructed as a drift fence to prevent livestock use of wildfire areas during recovery in the South Steens Allotment. The fence was built for most of its length in the Blitzen River WSA and just into the Donner und Blitzen Wild and Scenic River corridor. It is scheduled to be removed when recovery objectives are achieved.

If the Tombstone Drift Fence is left in, the proposal is to extend this fence to the west by approximately 3 miles, and add the Black Canyon Waterhole near the western end of the extension. This extension would cross the southern portion of the Steens Mountain Back Country Byway north of the Lauserica Road turnoff, where a cattleguard would be installed. The fence would continue to the west to the top of the ridge and then would be a series of gap fences, where needed, to the north and then to the west along the south side of Black Canyon. The waterhole would be constructed in a drainage just south of one of the gap fences and would be usable by livestock and wild horses from south of this fenceline.

**Alternative 2: No Action Alternative**

This action would allow the temporary Tombstone Drift Fence to remain in place until it is determined that rehabilitation objectives for the wildfires have been achieved as originally proposed. The Tombstone Extension Fence and Black Canyon Waterhole would not be constructed.

2. East Ridge Allotment Proposed Action and Alternatives

**Proposed Action: No Action**

Livestock management in the portion of the East Ridge Allotment remaining after completion of the land exchanges and exclusion of livestock from the upper Kiger Gorge area, would be similar to use as managed presently.

**Alternative: Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence**

In the East Ridge Allotment along Kiger Gorge (Map 3), several projects are being considered to allow for better livestock management after the land exchanges are completed. These projects include two fences, both less than a mile long, and three spring developments with exclosures, pipelines, and troughs. The Mid-Kiger Fence would be constructed across Kiger Gorge to allow more control over livestock movements in the canyon. This fence would be a 4-wire fence built to specifications for deer, pronghorn, and elk passage. Where this fence crosses Kiger Creek, swing panels constructed of aluminum would be suspended across the creek. These panels will allow water to flow unrestricted in the stream channel, but would control livestock movements. There is an existing trail to this point in the canyon bottom which would need to be upgraded to allow for ATV access for construction and maintenance of the fence.

Two springs, Mid-Kiger Spring 1 and Spring 2, to the west and uphill from the proposed Mid-Kiger Fence, would be developed to allow for more water availability in the pasture on top of the ridge. Development would consist of digging out an area of the spring and placing a water collection structure or headbox. The headbox is usually a 24 to 36-inch diameter perforated culvert pipe about 4 feet in length. Once in place, this headbox is filled with gravel to act as a filter for inflowing water. A pipeline is connected from the headbox to a water trough outside the spring area about 100 yards away. The pipeline is trenched into the ground similar to the Ready Pipeline, and covered up to protect the pipe from weathering and trampling by livestock. Once the spring is developed, exclosure fences would be put around the springs sources and water would be piped out to the trough. Float valves placed in the troughs would restrict water flow when not needed so it would remain at the spring area. ATV trails exist to these springs but would need upgrading to allow a backhoe access to the site. Upgrading would include cutting tree limbs and shrubs. The other spring, known as Bull Run Spring, is at the north end of the allotment. This spring would also be developed and piped out nearly a mile to the north. An exclosure fence would be constructed around the spring source, a float valve placed in the trough, and small wildlife escape structures (ramps, boards, rock piles) put in the troughs. The Lower Three Forks Fence, approximately 1-mile in length, would be constructed on the west side of Deep Creek to keep livestock in the allotment and to prevent them from accessing Deep Creek and private land owned by other than the permittee.

### CHAPTER III. AFFECTED ENVIRONMENT

Several EAs and the Draft Southeastern Oregon Resource Management Plan (SEORMP), listed in Appendix B, discuss general and site-specific aspects for the area considered for these projects. Site-specific details about critical elements not affected by these proposed actions and alternatives can be found in the documents listed in Appendix B. The affected critical and noncritical elements in the following tables will be discussed in this document. Not all proposed projects will affect all elements discussed.

The projects are generally distributed through about one-half of the approximately 425,520-acre CMPA including the Steens Mountain Wilderness Area, the no livestock grazing area, and the South Steens and East Ridge grazing allotments (Map 5). Also included is the entire Miners Field Allotment which is partially outside the CMPA. Elevation ranges from just over 4,100 feet north of Fields, Oregon, in the Ready Pasture to near 7,600 feet at the top of Straw Hat Pass on the east side of the Steens Mountain. Precipitation ranges from about 8 inches at the lowest elevations to 20+ inches at Straw Hat Pass and comes mainly in the form of snow with some spring rains. July and August tend to be the driest months of the year.

The following table of critical elements indicates whether or not they are affected by the proposed action and/or alternatives. Critical elements not affected by the proposed action or alternatives will not be discussed further in this document.

Table 4. Critical Elements

Critical Element	Affected	Not Affected/Not Present
Areas of Critical Environmental Concern (ACECs)	X	
Air Quality		X
Cultural Resources	X	
Environmental Justice		X
Prime or Unique Farmlands		X
Floodplains	X	
Hazardous Materials		X
Migratory Birds	X	
American Indian Religious Concerns		X
Noxious Weeds	X	
Paleontology		X
Special Status Species - Fauna	X	
Special Status Species - Flora	X	
Water Quality	X	
Wetland and Riparian Zones	X	
Wild and Scenic Rivers	X	
Wilderness and WSAs	X	

Table 5 lists other noncritical elements which, through scoping, was determined will be affected by the proposed actions and/or alternatives and will be discussed further in the document.

Table 5. Affected Noncritical Elements

Element	Affected	Not Affected
Wild Horses	X	
Wildlife	X	
Livestock Management	X	
Vegetation	X	
Soils	X	
Visual Resources	X	
Recreation	X	

A. Critical Elements

1. Areas of Critical Environmental Concern

Two of the proposed actions and alternatives are located in the Steens Mountain ACEC which covers much of the higher elevations of the mountain. These proposed projects are the Straw Hat Pass Fences and the fence in Kiger Gorge, both of which are to secure the no livestock grazing area. The ACEC is 56,187 acres, has high scenic values including the Steens Mountain escarpment, vistas of the East Rim, and glacial cirques and valleys.

2. Cultural Resources

There are no cultural sites known at present in the locations for any of the projects listed in the proposed actions and alternatives although cultural resources are known to occur on Steens Mountain and the surrounding areas. Once the locations of the projects have been determined in the field, surveys would be conducted to determine if any cultural sites are present.

3. Floodplains

Floodplains are those areas associated with streams and rivers that include the areas of deposition occurring in the stream channel. It also includes areas outside the normal channel which would be inundated with water during the average 25-year flood event.



4. Migratory Birds

About 70+ species of migratory birds are known to pass through or breed and nest in the area of the proposed projects. Some species documented in surveys include sage thrasher, Brewer's sparrow, chipping sparrow, American robin, dusky flycatcher, gray flycatcher, loggerhead shrike, western meadowlark, red-winged blackbird, Brewer's blackbird, mourning dove, as well as many species of migratory shorebirds, waterfowl, raptors, and other songbirds.

5. Noxious Weeds

Several species of noxious weeds are known to exist in the area of the proposed projects. There are known infestations of perennial pepperweed in Fields Seeding; Scotch thistle in O'Keefe, Miners Field, and Ready Pastures and spotted knapweed near Taber Cabin.

6. Special Status Species - Fauna

Many species of Special Status wildlife, fish, and amphibians are known to occur in the area for these projects. A list of these species is found in Appendix C.

7. Special Status Species - Flora

While there are no known endangered or threatened plant species in the project area, several species of sensitive plants (Appendix C) are known to occur in the Ready Pasture, Fields Seeding, Miners Field, O'Keefe Pasture, Straw Hat Pass, Kiger Gorge, Bradeen Crossing, Eusabio Ridge, and Taber Cabin.

8. Water Quality

The waters of the Donner und Blitzen Wild and Scenic River system have been placed on the 303D list by the Oregon Department of Environmental Quality (DEQ) for exceeding temperature parameters for cold water fish (redband trout). No other streams or creeks in the project area are included on this list.

9. Wetland and Riparian Zones

Riparian and wetland resources have been identified throughout the project area. Although most of these on public land have been inventoried as being in Proper Functioning Condition; about 20 percent are in functional at-risk with varying trends. Riparian vegetation communities occur along all perennial streams and springs. Common riparian plant species include willow, alder, redosier dogwood, chokecherry, sedges, rushes, and bluegrasses. Most of the riparian areas on public land within the Donner und Blitzen Wild and Scenic River corridor have not been grazed since 1996 when changes in grazing management were implemented.

10. Wild and Scenic Rivers

There are about 75 miles of Wild Rivers identified at present in the project area. These include the Donner und Blitzen Wild and Scenic River and its tributaries. With the passage of the Act, about 20 more miles of Wild Rivers have been included in the Wild and Scenic River system. These streams include Wildhorse and Little Wildhorse Creeks, upper Kiger Creek, and parts of Ankle and Mud Creeks which are on private land which would become public land after completion of the land exchanges. The Outstandingly Remarkable Values (ORVs) identified for the Donner und Blitzen Wild and Scenic River and its tributaries include Scenic, Geologic, Recreational, Fisheries, Wildlife, Vegetation, Cultural (Traditional Practices/Prehistoric) and Cultural (Historic). The ORVs are discussed in the Donner und Blitzen National Wild and Scenic River Management Plan. An assessment completed for the Draft SEORMP found Scenic, Fisheries, and Wildlife ORVs for Kiger Creek and Scenic, Recreation, Wildlife, and Fisheries ORVs for Wildhorse and Little Wildhorse Creeks. No ORV assessments have been done for Mud or Ankle Creeks.

11. Wilderness and Wilderness Study Areas

When the Act was signed, the 174,000-acre Steens Mountain Wilderness Area was created, most of which is in the project area. This wilderness area was created from parts or all of the Blitzen River, South Fork Blitzen River, Home Creek, Blitzen Gorge, High Steens, and Alvord Peak WSAs. Projects are also proposed in the remaining portions of the Blitzen River and South Fork Blitzen River WSAs.

B. Noncritical Elements

1. Wild Horses

The South Steens Wild Horse HMA is the only HMA included in the project area. There are 207,553 acres of public land in this HMA with an Appropriate Management Level (AML) of 159 to 304 horses. The last gather from this area occurred during late September 1998 and brought numbers down within the AML range. After foals are born in 2001, the estimated number of wild horses will be 275 head.

2. Wildlife

Wildlife occurring in the project area includes mule deer, elk, California bighorn sheep, pronghorn antelope, coyote, badger, ravens, magpies, golden eagles, chukar partridge, California quail, weasel, racoon, porcupine, ground squirrels, chipmunks, mice, shrews, bats, woodrat, beaver, mountain lion, bobcat, black-tailed jackrabbit, and cottontail. The project area includes year-long habitat for most of the species listed above.

3. Livestock Management

Projects listed in Chapter II (A) are associated with the forage replacement in the Miners Field Allotment while projects listed in Chapter II (B) are for fencing of the no livestock grazing area which includes South Steens, Fish Creek/Big Indian, Serrano Point, Alvord, and East Ridge Allotments. The livestock management projects (Chapter II (D)) would involve South Steens and East Ridge Allotments.

4. Vegetation

Several vegetation communities typical of the Great Basin are found in the project areas. In general, the communities are Wyoming big sagebrush/annual grasslands, Wyoming big sagebrush/bunchgrass, low sagebrush/bunchgrass, western juniper/low sagebrush, western juniper/big sagebrush, mountain big sagebrush/bunchgrass, mountain shrub, and aspen. Some of the bunchgrass species include bluebunch wheatgrass, Indian ricegrass, Thurber needlegrass, Idaho fescue, and crested wheatgrass. Depending on elevation and amount of precipitation, flowering plant species vary in abundance and species composition.

5. Soils

Soil textures are widely varied from alluvial soils near Fields (low elevation) ranging from sandy loams to loams with coarse rock fragments increasing as elevation increases, to moderately deep to deep, gravelly clay to gravelly loam textures near Alvord Peak. On the west side of Steens Mountain, soil textures range from shallow, rocky, fine-textured soils in low sagebrush areas (lower elevation), to deeper loam to clay loam soils in mountain sagebrush, mountain shrub, and aspen (higher elevation) community types.

6. Visual Resources

Visual Resource Management (VRM) designations are explained in Appendix D. The project area contains ratings from Class I to III. Wilderness areas and WSAs are designated a VRM rating of Class I.

7. Recreation

Various forms of recreation including but not limited to hunting, fishing, horseback riding, wildlife viewing, hiking, camping, and sightseeing occur in the project area. Most of the recreational activity occurs in the spring, summer, and fall with limited activity during the winter months at higher elevations but more activity at lower elevations.

## Chapter IV. ENVIRONMENTAL CONSEQUENCES/MITIGATION

A. Critical Elements

1. Areas of Critical Environmental Concern

Only the following proposed actions/alternatives would affect this element:

Straw Hat Pass

**Proposed Action:** Straw Hat Pass Gap Fences

The Straw Hat Pass Gap Fences would be located in the Steens ACEC. There would be no impacts to the scenic vistas in the ACEC from the construction of these fences. The gap fences would be short enough and have sufficient screening from topography that they would only be visible from close range.

**Alternative:** Straw Hat No Livestock Grazing Boundary

The Straw Hat No Livestock Grazing Boundary Fence would be more visible from longer distances since it would be 4 miles long but still would have minimal impacts to the scenic vistas in the Steens ACEC.

Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence

There would be no impacts to the scenic vistas in the Steens ACEC since there would be sufficient screening from topography and vegetation to block the view of the Kiger No Livestock Grazing Fence from the main Kiger Gorge viewpoint or other viewpoints along the upper edge of the gorge. However, it would be visible from points on the Kiger Gorge rim within 1 to 2 miles of the fence location.

**Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

This fence would have the same location as the wood weave fence but would only be visible from a shorter distance than the proposed action. This fence would have no impacts on the scenic vistas in the Steens ACEC.

2. Cultural Resources

No cultural sites are known for the project areas although, all proposed project sites would be surveyed prior to construction of projects. It is not expected that any of the fencing projects or surface-disturbing activities such as pipeline burial, waterhole construction, water trough placement or spring developments would have any impact on cultural resources. Should any significant cultural sites be discovered during initial surveys of projects sites, mitigation measures would be implemented. These measures may include site avoidance, data recovery or other protection or preservation measures as deemed necessary. Therefore, there would be no impact to cultural resources by any proposed action or alternative.

3. Floodplains

The floodplains in the no livestock grazing area would not be affected by the proposed actions since many of these areas have not been grazed since 1996. Only the following proposed actions/alternatives would affect this element:

## Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

Since these fences would be constructed in the same place and only differ in design, the impacts would be the same for both fences. Floodplains along Kiger Creek would be affected by the removal of livestock in the no livestock grazing area. Elk would still have access to this area and would continue to have an impact on the vegetation, although that impact would be less than the combination of both livestock and elk.

## Bradeen Crossing

**Proposed Action:** Gap Fences and Waterhole and **Alternative:** No Livestock Grazing Boundary Fence, Cattleguard and Waterhole

Although the gap fences in the proposed action and the alternative fence differ in length and placement, the effect on floodplains would be the same. Both of these fences would exclude livestock and wild horses from the existing water gap on the Donner und Blitzen Wild and Scenic River. This would improve vegetation condition and allow for healing of riparian areas and floodplains and improve floodplain function at the water gap.

## East Ridge Allotment

**Proposed Action:** No Action

The proposed action of no action for the Mid-Kiger Fence would allow livestock to be in the canyon longer with fewer moves between pastures and provide fewer opportunities for periodic rest. This would not improve or degrade floodplain function. Livestock management would still need to meet with Standards for Rangeland Health and Guidelines for Livestock Management.

**Alternative:** Mid-Kiger Fence

The Mid-Kiger Fence would affect floodplains by shortening the duration of livestock grazing, moving livestock more frequently and allowing for periodic rest for vegetation. This would improve floodplain function.

#### 4. Migratory Birds

Only the following proposed actions/alternatives would affect this element:

##### Ready Pasture

**Proposed Action:** Upper Bone Creek Gap Fence and **Alternative:** Lower Bone Creek Gap Fence

Even though the proposed action and alternative are in different locations they would have the same impact. If construction was during the nesting season, the fence projects would be expected to have short-term effects on breeding and nesting migratory birds during that time. The impacts would be to cause enough disturbance that nests along the fence route would be abandoned by the adult birds and the eggs would not hatch or young would perish before fledging. The number of nests along each fence route would not be known to be able to assess how many birds would be affected. Depending on the timing, the birds may or may not renest. This impact would only be during the construction time and would not be expected to have any impact in future years. However, if projects were constructed before May 15 and after July 15, no impacts to migratory birds would result. No long-term effects are anticipated from fence construction.

**Proposed Action:** Ready Well and Pipeline

The pipeline in the Ready Pasture is in a Wyoming big sagebrush/spiny hopsage site with very little understory vegetation. Migratory birds would probably not use this site for breeding and nesting due to both the lack of ground cover and other resources. It is expected that this project would have no effect on migratory birds. If this project was constructed before May 15 and after July 15, there would be no impacts to migratory birds. The troughs on the pipelines would have the effect of providing a water source where none exist now. Escape ramps, floating boards, and/or rock piles would be installed to allow trapped birds a way of climbing out of the water.

### **Alternative:** Burke Springs Pipeline Extension

There would be short-term impacts to migratory birds during the construction phase of this project if completed during the nesting season and in areas where birds would nest. If projects were constructed before May 15 and after July 15, there would be minimal impacts to migratory birds. The one-half mile portion of the pipeline west of the Fields-Folly Farm Road is in the Schouver Flat Seeding, mainly in crested wheatgrass, and should have no impacts to shrub nesting and ground nesting birds.

The one-half mile portion of the pipeline east of the Fields-Folly Farm Road in the Ready Pasture is in a Wyoming big sagebrush/spiny hopsage site with very little understory vegetation. Migratory birds would probably not use this site for breeding and nesting due to both the lack of ground cover and other resources. It is expected that this project would have no effect on migratory birds. If this project was constructed before May 15 and after July 15, there would be no impacts to migratory birds. The trough on the pipelines would have the effect of providing a water source where none exist now. Escape ramps, floating boards, and/or rock piles would be installed to allow trapped birds a way of climbing out of the water.

### Miners Field

**Proposed Action:** Miners Field Fence, Cattleguards, Waterholes, and Spring Maintenance and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

This fence project would be expected to have short-term effects on breeding and nesting migratory birds similar to those discussed in the Bone Creek Gap Fence section, if constructed during the nesting season, but would have no long-term effects. If projects were constructed before May 15 and after July 15, there would be minimal impacts to migratory birds. Construction of waterholes would occur after the nesting season so effects on migratory birds would be minimal. These waterholes would provide water which some migratory birds would use in areas where it did not exist before. The spring maintenance, if completed outside the breeding season, would have no impacts. The existing troughs at the spring development would have escape structures installed, but birds might water more readily from the spring source where water would still be available.



## Fields Seeding

### **Proposed Action:** Fields Seeding Pipeline

There would be short-term impacts to migratory birds during the construction phase of this project if completed during the nesting season and in areas where birds would nest. If projects were constructed before May 15 and after July 15, there would be minimal impacts to migratory birds. The pipeline in Fields Seeding Pastures is mainly in crested wheatgrass and should have no impacts to shrub nesting and ground nesting birds. The troughs on the pipelines would provide a water source where none existed before. Escape ramps, floating boards, and/or rock piles would be installed on all troughs to allow trapped birds a way of climbing out of the water troughs.

## O'Keefe Pasture

### **Proposed Action:** O'Keefe Well and Pipeline and **Alternative:** O'Keefe Well and Pipeline with Fields Seeding Extension

Refer to the Fields Seeding Pipeline discussion for the effects of this proposed project and alternative.

## Eusabio Ridge

### **Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary, and **Alternative 2:** Private/Public Boundary

This proposed action and alternatives would all have the same effects on migratory birds although over a longer area. Refer to the Ready Pasture fence discussion for these effects.

## Wildhorse Canyon

### **Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

This proposed action and alternative would have the same effect on migratory birds. Refer to the Ready Pasture fence discussions for these effects.

#### Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

The proposed action and alternatives would have the same effects on migratory birds. Refer to the Ready Pasture fence discussion for these effects.

#### Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

These two actions would have the same effect on migratory birds. Refer to the Ready Pasture fence discussion for these effects.

#### Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development and **Alternative 1:** Gap Fences

The proposed action and Alternative 1 would have the same effect on migratory birds. Refer to the Ready Pasture fence discussion for these effects. Construction of the waterhole would occur after the nesting season so there would be no effects on migratory birds and would provide water in areas where it did not exist before which some migratory birds would use.

#### Bradeen Crossing

**Proposed Action:** Gap Fences and Waterhole and **Alternative:** No Livestock Grazing Boundary Fence, Cattleguard, and Waterhole

The proposed action and the alternative would have the same effects on migratory birds. Refer to the Ready Pasture fence discussion for these effects. Construction of the waterhole would occur after the nesting season so there would be no effects on migratory birds. This waterhole would provide water in areas where it did not exist before which some migratory birds would use.

## Taber Cabin

### **Proposed Action:** Waterhole Construction

Refer to the discussion of the Burnt Car Proposed Action as the effects on migratory birds would be the same.

## Fence Removal in Wilderness and WSAs

### **Proposed Action:** Helicopter Use; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

In all three situations, if the removal of fences within the no livestock grazing area was completed before May 15 or after July 15, it would have no effect on migratory birds.

## South Steens Allotment

### **Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

Refer to the discussion of Bradeen Crossing Proposed Action for a discussion of the effects of this project.

## East Ridge Allotment

### **Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

There would be short-term impacts to migratory birds during the construction phase of many of the projects if completed during the nesting season and in areas where birds would nest. If projects were constructed before May 15 and after July 15, there would be no impacts to migratory birds. The troughs at spring developments would have escape structures installed. Birds might water more readily from the spring source where water would still be available. The fence projects would be expected to have short-term effects on breeding and nesting migratory birds during construction if conducted during the nesting season, but would have no long-term effects.

5. Noxious Weeds

Only the following proposed actions/alternatives would affect this element:

Ready Pasture

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension

There are known infestations of noxious weeds in the Ready Pasture. In areas where noxious weeds have been located, surface-disturbing activities, such as well drilling and pipeline placement, allow for the continued spread of those species. Known populations of noxious weeds in this project area would be controlled before and after construction activities are conducted to keep spread to a minimum. Vehicles would be cleaned before and after working in this area to reduce the risk of spreading noxious weed seeds to other areas. After project completion the site would be monitored to detect and control any spread of noxious weeds. By implementing these measures it is anticipated that no spread of noxious weeds would occur. Also these measures would follow the Burns District Noxious Weed Program guidelines.

Miners Field

**Proposed Action:** Waterholes, Spring Maintenance

There are known infestations of noxious weeds in the Miners Field Pasture. Surface-disturbing activities such as waterhole construction and spring maintenance, in areas where noxious weeds have been located allow for the continued spread of those species. See the Ready Pasture noxious weed discussion above for the effects and mitigation that would be the same for this project.

Fields Seeding

**Proposed Action:** Fields Seeding Pipeline

There are known infestations of noxious weeds in the Fields Seeding Pasture. Refer to the Ready Pasture noxious weed discussion above for the effects of this project.

## O'Keefe Pasture

### **Proposed Action:** O'Keefe Well and Pipeline

There are known infestations of noxious weeds in the O'Keefe Pasture. Refer to the Ready Pasture noxious weed discussion for the effects of this project.

## Burnt Car

### **Proposed Action:** Burnt Car Gap Fences and Water Development

There are no known infestations of noxious weeds in this area. Surface-disturbing activities such as pipeline placement, waterhole construction, and spring maintenance provides opportunities for the continued spread of invasive species. This project site and access to this site would be surveyed prior to construction to determine if noxious weeds are present. Newly-discovered populations of noxious weeds in project areas would be controlled before and after construction activities are conducted to keep spread to a minimum. Vehicles would be cleaned before entering and after working in these areas to reduce the risk of spreading noxious weed seeds. After project completion the site would be monitored to detect and control spread of these species. By implementing these measures it is anticipated that no spread of noxious weeds would occur. Also, the measures would follow the Burns District Noxious Weed Program guidelines.

## Bradeen Crossing

### **Proposed Action:** Gap Fences and Waterhole and **Alternative:** No Livestock Grazing Boundary Fence, Cattleguard and Waterhole

There are no known infestations of noxious weeds in this area. Refer to the discussion for the Burnt Car Proposed Actions for effects of waterhole construction in either the proposed action or alternative.

## Taber Cabin

### **Proposed Action:** Waterhole Construction

There are known infestations of noxious weeds near Taber Cabin. Refer to the discussion for the Burnt Car for effects of this action.

## South Steens Allotment

### **Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain and Extension

There are no known infestations of noxious weeds in this area. Refer to the discussion for the Burnt Car Proposed Actions for effects of this action.

## East Ridge Allotment

### **Alternative:** Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline

There are no known infestations of noxious weeds in this area. Refer to the discussion for the Burnt Car Proposed Actions for effects of this action.

## 6. Special Status Species - Fauna

Of the species listed in Appendix C, no listed endangered, threatened or candidate species would be affected by the proposed actions or alternatives. Of the sensitive species listed, ferruginous hawk, loggerhead shrike, sage sparrow, and vesper sparrow are considered migratory birds. Refer to the Migratory Bird discussion above for the effects of the proposed actions and alternatives on these species. The effects of the proposed actions/alternatives on Catlow Valley redband trout, inland redband trout, Malheur mottled sculpin, and greater sage grouse will be discussed in this section as these are the only species that will be affected.

Only the following proposed actions/alternatives would affect this element:

### Miners Field

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

The area of these proposed actions is considered late brood-rearing sage grouse habitat but the level of sage grouse use is undetermined at this time.

During construction, there would be some short-term disturbance to sage grouse. Waterholes may be used by sage grouse during different times of the year. There would be no long-term effects of these proposed actions on sage grouse.

#### O'Keefe Field

**Proposed Action:** O'Keefe Well and Pipeline

Refer to the description of Miners Field for the effects of this project on sage grouse.

#### Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary and **Alternative 2:** Private/Public Boundary

The Eusabio Ridge Fence crosses Deep Creek and the Donner und Blitzen Wild and Scenic River. Both contain inland redband trout and Malheur mottled sculpin. Construction of the portions of fences that cross, and are immediately adjacent to, the streams may result in sediment movement into the water and/or increased turbidity, potentially resulting in adverse impacts to fish. These impacts are expected to be minimal, short term and would not affect population viability of any fish species. Over the long term, the fences are expected to have an impact on fish species within the Donner und Blitzen Wild and Scenic River and Deep Creek. The Eusabio Ridge Fence will exclude livestock from the portions of the Donner und Blitzen Wild and Scenic River and Deep Creek that are within the no livestock grazing area. This would eliminate livestock impacts on those portions of these creeks and associated riparian areas.

New fences, no matter what materials are used, would provide additional raptor roosts in areas of sage grouse nesting and brood-rearing habitat and pose a collision hazard to flying sage grouse.

#### Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development and **Alternative 1:** Gap Fences

The fencing projects which would keep livestock out of the riparian areas along the Donner und Blitzen Wild and Scenic River system areas in the no livestock grazing area would improve both riparian and instream habitat conditions for Inland redband trout and Malheur mottled sculpin.

Waterholes are used by sage grouse as both watering and feeding areas due to the amount of forbs available during the spring time.

#### Bradeen Crossing

**Proposed Action:** Gap Fences and Waterholes and **Alternative:** No Livestock Grazing Boundary Fence, Cattleguard and Waterhole

Refer to the discussion for Burnt Car for the effects of this proposed action or alternative.

#### Taber Cabin

**Proposed Action:** Waterhole Construction

Refer to the discussion for Burnt Car for the effects of this proposed action.

#### Fence Removal in Wilderness and WSAs

**Proposed Action:** Fence Removal; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

Removal of fences within the no livestock grazing area would reduce raptor perches in a large area of greater sage grouse nesting and brood-rearing habitat.

#### South Steens Allotment

**Proposed Action:** Tombstone Drift Fence RMP Analysis

The proposed action would extend the life of the Tombstone Drift Fence for 3 years and allow for some flexibility in livestock management in the South Steens Allotment. This would assist in the sustainable management of the Catlow streams and help to accomplish the objectives of the Catlow Conservation Agreement.



**Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

The Tombstone Extension Fence would be within 1-mile of a sage grouse lek but would be routed through a juniper stand so it would not provide any new perches from which raptors could prey on sage grouse.

The Catlow Valley redband trout and tui chub would be affected by the Tombstone Drift Fence and the Tombstone Fence Extension projects. By making the temporary Tombstone Drift Fence permanent and constructing the Tombstone Extension Fence, a basic structure would be available to provide for periodic rest and to control the timing and frequency of grazing in what remains of the South Steens Allotment. This would assist in the sustainable management of the Catlow streams and help to accomplish the objectives of the Catlow Conservation Agreement.

**Alternative 2:** No Action Alternative

Under this alternative, the Tombstone Drift Fence would be removed within 2 years when rehabilitation objectives have been reached for wildfire areas in the South Steens Allotment. This would reduce flexibility for livestock management in the South Steens Allotment and associated private land in the Catlow Conservation Agreement area and would lengthen the timeframe for attainment of objectives

East Ridge Allotment

**Proposed Action:** No Action

**Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

The sage grouse would be affected by the fence construction and the spring developments. Fence construction would provide additional raptor roosts in areas of sage grouse nesting and brood-rearing habitat and pose a collision hazard to flying sage grouse. During construction, there would be some short-term disturbance to sage grouse. Waterholes are used by sage grouse as watering and feeding areas due to the amount of forbs available during the spring time. Water troughs at spring developments would be fitted with float valves to allow as much water as possible to remain at the spring source which is where sage grouse usually water and feed. Exclosure fences around spring sources would have the same effects as described above for other fences.

7. Special Status Species - Flora

Only the following proposed actions/alternatives would affect this element:

Ready Pasture

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension and Fields Fence

Miners Field

**Proposed Action:** Miners Field Fence, Waterholes, and Spring Maintenance and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

Fields Seeding

**Proposed Action:** Fields Seeding Pipeline

O'Keefe Pasture

**Proposed Action:** O'Keefe Well and Pipeline

Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary and **Alternative 2:** Private/Public Boundary

Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

Bradeen Crossing

**Proposed Action:** Gap Fences and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

Taber Cabin

**Proposed Action:** Waterhole Construction

East Ridge Allotment Proposed Action

**Alternative:** Mid-Kiger Fence

The sensitive plant species listed in Appendix C are known to occur in the vicinity of the listed proposed actions/alternatives. Once the projects are laid out in the field, surveys would be conducted to see if the projects would impact sensitive plants. Projects would be redesigned or moved to avoid populations of sensitive plant species. Therefore, no impacts to sensitive plants are predicted.

8. Water Quality

Only the following proposed actions/alternatives would affect this element:

Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary, and **Alternative 2:** Private/Public Boundary

There is expected to be no effect of the proposed actions/alternatives on water quality in the Donner und Blitzen Wild and Scenic River system since most of this system has had no livestock grazing since 1996 and some areas longer. Records indicate that water temperature has not decreased since livestock removal and that water temperatures above the limits set by DEQ may be a factor of other environmental conditions.

Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development; **Alternative 1:** Gap Fences, and **Alternative 2:** No Action

Refer to the Eusabio Ridge Proposed Actions discussion for the effects of this action.

## Bradeen Crossing

**Proposed Action:** Gap Fences and Waterholes and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

Refer to the Eusabio Ridge Proposed Actions discussion for the effects of this action.

## 9. Wetland and Riparian Zones

Only the following proposed actions/alternatives would affect this element:

### East Ridge Allotment

**Proposed Action:** No Action

The proposed action, no action, for the projects in the East Ridge Allotment would affect riparian resources at the Mid-Kiger Springs, Bull Run Spring, and along Kiger Creek outside the no livestock grazing area. Livestock would still have access to the water and vegetation at the spring source. Depending on the timing and duration of livestock grazing, effects to the spring sources could include loss of surface water and vegetation. Livestock management would not have much flexibility to move livestock frequently and allow for rest to maintain vigor in the riparian vegetation. Livestock management would still need to meet Standards for Rangeland Health and Guidelines for Livestock Management.

**Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

Three springs, Mid-Kiger Springs 1 and 2 and Bull Run Spring, would be affected through development by placement of a headbox and pipeline at the spring source to run water out to a trough. The soils and vegetation would be disturbed but should recover within a year since these areas will be fenced after development to protect the spring source. Float valves would be installed on the troughs to allow water to stay in the spring area instead of being continually drained off. Shutoff valves would be installed near the headbox so that when livestock are not in the area, no water would run through the pipeline. This would keep the most water possible at the spring source.

The riparian areas along Kiger Creek outside the no livestock grazing area would be affected by the Mid-Kiger Fence which would allow for more flexibility in managing livestock. By creating smaller pastures, livestock would be moved more frequently through the canyon bottom which would provide more time for regrowth of riparian vegetation after the livestock have been removed. This fence would also allow for the different pastures to be rested on a rotational basis for the riparian vegetation to complete its life cycle and improve vigor. This rest would also allow for full vegetation growth that year to help with sediment trapping and less erosion during high spring runoff events.

#### Miners Field

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

Only the spring maintenance portion of the proposed action would affect wetland and riparian zones. The spring maintenance would be at Miners Spring. Currently, water does not flow to the trough anymore. The proposed maintenance would allow water to flow to the trough providing water to livestock at a source away from the spring. A float valve would be installed at the trough to restrict flow to the trough when water is not needed. Riparian vegetation should recover within 1 to 2 years since the grazing season of use is early and would allow for full growth after livestock are removed.

#### Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence

Riparian areas in the no livestock grazing area would be affected by the reduction in livestock grazing which would allow riparian vegetation to improve in vigor and have a greater standing mass. This would allow for more vegetation present during high spring runoff events and improved sediment trapping. While wild horses may still graze in these areas, the impact would be less than the combination of both livestock and wild horses.

## Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

Refer to the discussion of Eusabio Ridge for the effects of this action.

## Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

Refer to the discussion of Eusabio Ridge for the effects of this action.

## Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development

There are two springs at Burnt Car. The spring inside the no livestock grazing area, wilderness, and Wild and Scenic River corridor would be protected by the gap fence on the no livestock grazing boundary. The other spring would be protected by an enclosure fence installed around it. These fences would provide protection for wetland vegetation and the spring source.

### **Alternative 1:** Gap Fences

This alternative would allow livestock and wild horses to graze at the spring outside the no livestock grazing area. While these animals would still have access to water, they would still have access to vegetation in the spring area which would have impacts on the vegetation and spring source.

### **Alternative 2:** No Action

This alternative would allow livestock and wild horses access to both springs at Burnt Car and would impact vegetation and spring sources at both springs.

## Bradeen Crossing

**Proposed Action:** Gap Fences and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

Other riparian areas in the no livestock grazing area would be affected by the reduction in livestock grazing which would allow riparian vegetation to improve in vigor and have a greater standing mass. This would allow for more vegetation present during high spring runoff events and improved sediment trapping. While wild horses may still graze in these areas, the impact would be less than the combination of both livestock and wild horses.

10. Wild and Scenic Rivers

Only the following proposed actions/alternatives would affect this element:

Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence and **Alternative 1:** No Livestock Boundary and **Alternative 2:** Private/Public Boundary

This western segment of this fence would affect the Deep Creek and Donner und Blitzen Wild and Scenic River segments of this wild river system. Through the visual and physical presence of humanmade, unnatural fences, fence construction would affect the Scenic and Recreational ORVs. The fences would also affect the Vegetation and Fisheries ORVs through the continued exclusion of livestock grazing in the wild river corridors. The Wild and Scenic River Manual (BLM Manual 8351) states that "occasional fencing, . . . may be permitted if they are unobtrusive and do not have a significant direct and adverse impact on the natural character of the river area."

Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence

The Wildhorse Lower Fence Proposed Action would affect only the Vegetation and Fisheries ORVs as this fence would not be near the Wildhorse Creek Wild and Scenic River corridor. It would still protect the wild river from livestock grazing.

**Alternative:** Wildhorse Upper Fence

This fence would be located at the lower end of the Wild and Scenic River corridor on Wildhorse Creek. Through the visual and physical presence of the humanmade, unnatural structures, construction of this fence would affect the Scenic and Recreational ORVs. The same fence would also affect the Vegetation and Fisheries ORVs through the removal of livestock grazing in the wild river corridor.

Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

These fences would be at the same location at the lower end of the Wild and Scenic River corridor. Construction of these fences would affect the Scenic and Recreational ORVs through the visual and physical presence of the fences. The same fences would also affect the Vegetation and Fisheries ORVs through the removal of livestock grazing in the wild river corridor.

Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development and **Alternative 1:** Gap Fences

The gap fences in the proposed action and Alternative 1 are the same so the same impacts are anticipated for both actions. Construction of these fences would affect the Scenic and Recreational ORVs through the visual and physical presence of the fences. The same fences would also affect the Vegetation and Fisheries ORVs through the removal of livestock grazing in the wild river corridor.

**Alternative 2:** No Action

Burnt Car Alternative 2 would allow livestock grazing in the Donner und Blitzen River Wild and Scenic River corridor and would have an impact on the Vegetation ORV. It would not impact the Scenic and Recreational ORVs since no fences would be constructed. The Fisheries ORV would not be affected since livestock cannot reach the Donner und Blitzen in this area.



## Bradeen Crossing

### **Proposed Action:** Gap Fences

These two short fences would be located in the Wild and Scenic River corridor and would allow some livestock grazing within the corridor but would keep them out of riparian area and the wild river. Through the visual and physical presence of humanmade, unnatural fences, fence construction would affect the Scenic and Recreational ORVs. The fences would also affect the Vegetation and Fisheries ORVs through the removal of livestock grazing in the wild river corridor.

### **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

This fence would be about 2 miles long and would exclude livestock from the Wild and Scenic River corridor. Refer to the Bradeen Crossing Proposed Action discussion for the effects of this alternative.

## Fence Removal in Wilderness and WSAs Proposed Action

**Proposed Action:** Fence Removal; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

Fence removal in the no livestock grazing area would affect the Scenic and Recreational ORVs through the removal of the visual and physical presence of humanmade, unnatural structures along the wild rivers.

## South Steens Allotment

### **Proposed Action:** Tombstone Drift Fence RMP Analysis

The Tombstone Drift Fence would remain in place until analyzed in the proposed Andrews RMP which is scheduled for completion in 2004 or at least three more years. Through the visual and physical presence of humanmade, unnatural structures, this fence would affect the Scenic and Recreational ORVs in the wild river corridor. This fence does not keep livestock out of the corridor although they cannot reach the river in this area. Fisheries ORVs are not affected by this fence.

**Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

The Tombstone Drift Fence would remain in place. The effects of this action are the same as discussed above for the proposed action.

**Alternative 2: No Action Alternative**

The Tombstone Drift Fence would remain in place until burned area rehabilitation objectives have been met, which would be in 1 or 2 years. Through the visual and physical presence of humanmade, unnatural structures, this fence would affect the Scenic and Recreational ORVs in the wild river corridor but only until it would be removed in the near future. This fence does not keep livestock out of the corridor although they cannot reach the river in this area. Fisheries ORVs are not affected by this fence.

11. **Wilderness and Wilderness Study Areas**

**Common to Proposed Fencing Projects and Alternatives:**

The fencing projects in the wilderness or WSAs would be in conflict with the opportunities for primitive and unconfined recreation and the retention of naturalness of the area. Depending on the method of transporting fence materials to some of the remote locations (sling load with helicopter, packing on foot or horseback) for proposed fences, there would be a loss of naturalness and solitude during these times. Transport of these materials would be accomplished at times of low visitor use. This loss of solitude would extend into the construction of the fence as posts are pounded into the ground, barbed wire strung or rocks piled by a group of people. The fenceposts would be all one color instead of having white tops to help blend in with the landscape. There would be a loss of naturalness for 1 to 2 years from flagging that would be put on the new fences for recognition by wildlife and wild horses. The overall impact of these fences is to keep livestock out of the no livestock grazing area which would reduce human-livestock interactions and contribute to the naturalness and solitude of that area.

Only the following proposed actions/alternatives would affect this element:

**Ready Pasture**

**Proposed Action:** Upper Bone Creek Gap Fence and **Alternative:** Lower Bone Creek Gap Fence

The only difference from the "Common to Proposed Fencing Projects and Alternatives" discussion is that the proposed action would be visible from a shorter distance and would have more screening from topography and vegetation, than the alternative.

#### Miners Field

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

This proposed action would effect wilderness values through the surface disturbance at springs which would be noticeable for about a year after maintenance. Since this is a spring source, vegetation would regrow quickly. Livestock grazing is early season and would allow for full regrowth of vegetation.

#### Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence

Only the easternmost end of this proposed action would affect wilderness values as discussed above. Where rock fences are proposed, there would be up to 15 people working for 1 or 2 days, so disturbance to others in the area would be short term. Rock fences would be noticeable from a distance but would allow bighorn sheep unrestricted movement in these areas. The presence of bighorn sheep in these areas is considered to add to the naturalness of the wilderness.

**Alternative 1:** No Livestock Grazing Boundary

The impacts of this alternative would be the same as the proposed action.

**Alternative 2:** Private/Public Boundary

This alternative would have the least amount of fence in the wilderness since it would be on the public/private land boundary for most of its length. The last 100 to 200 yards would be rock fence and in the wilderness. This alternative would have the least impacts to wilderness values.

## Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

Wildhorse Canyon Fence has two alternatives both of which are in wilderness. The proposed Wildhorse Lower Fence would be longer and would have more impacts of humanmade structures, loss of naturalness, loss of opportunities for primitive and unconfined recreation than the alternative.

## Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

Refer to the "Common to Proposed Fencing Projects and Alternatives" discussion above for the effects of this proposed action or alternative on wilderness values. This shorter fence would have fewer impacts on wilderness values than the alternative.

## Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

Refer to the "Common to Proposed Fencing Projects and Alternatives" discussion above for the effects of this fence on wilderness values. The alternative design would reduce visual impacts as it would be visible from a shorter distance.

## Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development and **Alternative:** Gap Fence

Refer to the "Common to Proposed Fencing Projects and Alternatives" discussion above for the effects of the fence portion or alternative on wilderness values. The pipeline and trough at Burnt Car would add unnatural features in the Blitzen River WSA. The disturbance from laying the pipeline would be seeded with native seed and contoured to predisturbance levels. The trough would be painted to match the background and would be placed in or near a juniper stand to screen it from direct sight.

## Bradeen Crossing

### **Proposed Action:** Gap Fences and Waterhole

The fences would have the same impacts on wilderness values as discussed above in the "Common to Proposed Fencing Projects and Alternatives." The gap fences would be difficult for visitors traveling the back country byway to see since vegetation screening, placement of the fences, and their short length would aid in blending in with the surroundings. Although the fences would be noticeable from close range and an obstacle for hikers, they should be able to hike around them and find access to the Blitzen River.

The waterholes at Weaver place would add an unnatural feature in the South Fork Blitzen WSA. If these waterholes were constructed in the fall, the disturbance to recreationists would be lessened. Winter snows and subsequent spring moisture would help reduce the signs of disturbance and would allow seeded native species an opportunity to germinate and revegetate the dam sites.

### **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

The fences would have the same impacts on wilderness values as discussed above in the "Common to Proposed Fencing Projects and Alternatives." The longer fence along the wilderness/no livestock grazing boundary, would be substantially more noticeable to even casual visitors from longer distances and detract more from the naturalness of the area than the proposed action.

## Taber Cabin

### **Proposed Action:** Waterhole Construction

The proposed waterholes near Taber Cabin would add unnatural features in the South Fork Blitzen WSA. If these waterholes were constructed in the fall, the disturbance to recreationists would be lessened. Winter snows and subsequent spring moisture would help reduce the signs of disturbance and would allow seeded native species an opportunity to germinate and revegetate the dam sites.

## Fence Removal in Wilderness and WSAs

**Proposed Action:** Fence Removal; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

Minimum tool analysis was used to determine which alternative(s) would be allowed for fence removal in the wilderness and WSAs. All methods were determined to have a disturbance factor that would affect the naturalness and solitude during the fence removal process. The motorized vehicle alternative would have a greater disturbance but over a shorter time period than more primitive methods. If fence removal was planned for times of the year when few visitors were around, the disturbance would be less. Though the process of fence removal would cause disturbance, the end product of about 55 miles of fence removed from the interior of the wilderness would add to the naturalness, solitude, and opportunities for primitive and unconfined recreation.

## South Steens Allotment

**Proposed Action:** Tombstone Drift Fence RMP Analysis and  
**Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

The Temporary Tombstone Drift Fence is both in wilderness and WSA. This fence is supposed to be removed when fire rehabilitation objectives have been met for burned areas south of this fence. To keep this fence as a permanent development in the WSA, it would need to be substantially unnoticeable in the landscape and enhance wilderness values. As discussed for other fences above, this fence would be an unnatural, humanmade structure, and would impact opportunities for primitive, unconfined recreation and solitude in the wilderness and WSA. This fence, as originally discussed in the Dry Creek Fire, Emergency Fire Rehabilitation Plan and EA (EA OR-026-98-036) in which it was approved, had an adverse impact on wilderness values. Parts of this fence near Bald Headed Camp are noticeable from the Steens Mountain Back Country Byway and would be noticeable from existing ways in the WSA. If this area were to become wilderness, the part near Bald Headed Camp would still be noticeable from the road but the majority of the fence would only be noticeable from close range when encountered by persons on foot or horseback. The fence closest to the road at Bald Headed Camp is on private land. Refer also to the discussion above "Common to Proposed Fencing Projects and Alternatives."

## No Action Alternative

The No Action Alternative would be to remove the fence pursuant to the decision record for EA OR-026-98-036. This would remove it from sight from the back country byway and existing ways in the WSA. People hiking or on horseback would not encounter this fence which would not restrict their movements and allow for unconfined recreational opportunities. Livestock would be more scattered across a larger landscape when present and would be around water sources longer. Visual impacts around water sources from bare soil and feces would be more noticeable and detract from the wilderness experience.

### B. Noncritical Elements

#### 1. Wild Horses

Only the following proposed actions/alternatives would affect this element:

Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary, and **Alternative 2:** Private/Public Boundary

Although the land south of the ridge is still within the HMA, the Eusabio Ridge Fence Proposed Action and alternatives would stop wild horses from accessing those areas as they have in the past. When the pending land exchanges are complete, all land south of this fence would become private. Horses would still have access to water sources and forage in the no livestock grazing area within the HMA. Existing fences along the western boundary of the no livestock grazing area would restrict movement of horses to and from that area. Gates would be left open in these boundary fences when livestock are not present west of the Donner und Blitzen Wild and Scenic River.

## Burnt Car

### **Proposed Action:** Burnt Car Gap Fences and Water Development

The gap fences would keep wild horses from accessing one spring in the no livestock grazing area, Wild and Scenic River corridor, and wilderness area. It would also exclude wild horses from another spring outside these areas but still within the Blitzen River WSA. Water would be developed outside the spring source at a water trough or waterhole for wild horses and livestock.

### **Alternative 1:** Gap Fence

This alternative differs from the proposed action in that only the gap fences would be constructed which would keep wild horses from one spring source, but allow horse access to the spring in the Blitzen River WSA.

## Bradeen Crossing

### **Proposed Action:** Gap Fences and Waterhole and **Alternative:** No Livestock Grazing Boundary Fence, Cattleguard and Waterhole

Even though the placement and length of these fences are different, the impacts to wild horses would be similar. Both of these fences would keep wild horses from accessing the water gap. Horses may have access to the Donner und Blitzen Wild and Scenic River in other areas but this is unknown at present. The proposed waterhole near the Weaver place would be constructed to replace the lost water source at Bradeen Crossing. Waterholes have the possibility of going dry during drought years, but wild horses would still be able to access perennial waters along the Donner und Blitzen Wild and Scenic River system when livestock are not in the area. Wild horses also have trails to the river that livestock will not use.

## Taber Cabin

### **Proposed Action:** Waterhole Construction

Refer to the Bradeen Crossing Proposed Action for the effects of this proposed action. When livestock are present, the only other water source in the area is Three Springs which is about 2 miles to the southwest.



The combination of wild horses and livestock at this water source impacts the source. The construction of the waterholes would alleviate this situation and would effect the wild horses by increasing available water when livestock are present.

**Alternative:** No Waterhole Construction

In this alternative, wild horses would still have access to water along the Donner und Blitzen Wild and Scenic River at the water gap when livestock are not in the area. When livestock are present, the only other water source in the area is Three Springs which is about 2 miles to the southwest. The combination of wild horses and livestock at this water source impacts the source.

Fence Removal in Wilderness and WSAs

**Proposed Action:** Fence Removal; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

This proposed action and alternative would have short-term disturbance impacts on wild horses. The removal of fences in the no livestock grazing area of the HMA would allow horse to move freely in this area without encountering fences. Horses would have access to water sources and forage in the no livestock grazing area within the HMA. Existing fences, along the western boundary of the no livestock grazing area, would restrict movement of horses to and from that area when gates are closed. Gates would be left open in these boundary fences when livestock are not present west of the Donner und Blitzen Wild and Scenic River.

South Steens Allotment

**Proposed Action:** Tombstone Drift Fence RMP Analysis

In this proposed action, the temporary Tombstone Drift Fence would be left in until analysis was completed in the proposed Andrews RMP which is scheduled to be completed in 2004. The effects of this action would be that horse would still have access through the fence when livestock are not present and would be able to go around the west end of the fence to access other areas of the HMA. Horses found north of this fence stay north most of the time. No effects on wild horses are anticipated by this action.

**Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

Allowing the Tombstone Drift Fence to remain and constructing the extension would have the effect breaking up what is now open range for the wild horses. The longer fences would have the impact of changing wild horse movements unless gates are constructed along frequently used horse trails. Even with gates along these paths, horses may not pass through those openings. Gates would be closed when livestock are in the area, but would be opened when the livestock were moved. Depending on the duration and the timing of livestock use, this could cause alterations to wild horse movements. Wild horses located north of this proposed project do not tend to move south of this proposed fenceline except during drought years. The open gates would still allow wild horse access to water in other areas of the HMA.

## **Alternative 2: No Action Alternative**

The No Action Alternative for the South Steens Allotment would be to pull out the temporary Tombstone Drift Fence when burned area rehabilitation objectives have been achieved. This would open up the area for wild horses to move without encountering a fence. All existing waters would still be available to wild horses.

## 2. Wildlife

Only the following proposed actions/alternatives would affect this element:

### Ready Pasture

**Proposed Action:** Upper Bone Creek Gap Fence and **Alternative:** Lower Bone Creek Gap Fence

Although the placement of the proposed action and alternative would be different, they would have the same effect on wildlife. The fence would be built to specifications for bighorn sheep, deer, and pronghorn passage. Since both fences would be short, bighorn sheep would be able to go around as well as through the fence. There should be no impacts to wildlife from either fence placement.

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension

Wildlife would be impacted during the construction phase of this project but this would be short term and no long-term impacts would occur.

Water troughs would provide additional water sources in certain areas that wildlife would use. Escape ramps, floating boards, and/or rock piles would be installed on all troughs allowing trapped wildlife a way to climb out.

#### Miners Field

##### **Proposed Action:** Miners Field Fence, Waterholes, and Spring Maintenance

The proposed Miners Field Fence route would cross a bighorn sheep winter and spring migration route. In the past, with fences close to the road, bighorns have become entangled when trying to run off the road to avoid passing vehicles. The 300-yard setback is to allow bighorns adequate escape space should this occur. Wire spacings would allow bighorn sheep, as well as mule deer and pronghorn, to move through the fence easily without becoming entangled.

Refer to the Ready Well and Pipeline discussion above for effects of waterholes and spring maintenance.

##### **Alternative 1:** Miners Field Fence ROW

This alignment of the Miners Field Fence would differ from the proposed action at the north end where it would be routed along the road ROW. Even with wire spacing to allow bighorn sheep movement through the fence, this placement would effect bighorns by not allowing adequate escape space if they encountered vehicles while trying to cross the Fields-Folly Farm Road.

##### **Alternative 2:** Miners Field South Fence

This project would have no impacts on bighorn sheep as it is out of the bighorn migration area.

#### Fields Seeding

##### **Proposed Action:** Fields Seeding Pipeline

Refer to the Ready Well and Pipeline discussion above for effects of pipelines and troughs on wildlife.

## O'Keefe Pasture

**Proposed Action:** O'Keefe Well and Pipeline and **Alternative:** O'Keefe Well and Pipeline with Fields Seeding Extension

Refer to the Ready Well and Pipeline discussion above for effects of pipelines and troughs on wildlife.

## Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence

This proposed fence placement, especially the east end, would have few if any impacts to wildlife, mainly bighorn sheep, which use the East Rim of the Steens Mountain extensively during late spring through late fall months. This fence location would be the most direct to the East Rim and would be the least amount of fence for bighorn sheep to negotiate. The last 100 to 200 yards of the east end of this fence would be a rock fence which bighorn sheep would be able to cross easier than a barbed wire fence. From the west end of the rock fence, the fence would be 4-wire barbed wire as described in the project proposal which would allow bighorns passage.

**Alternative 1:** No Livestock Grazing Boundary

This alternative would be the same as the proposed action except for the east end of the fence route which would follow the no livestock grazing boundary to the east and then along a canyon rim out to the East Rim. Even with design features as described for the proposed action, this fence would be harder for bighorns to negotiate since more of the fence would be along rims where bighorns move. The effect of this placement would make escape for bighorns difficult and increase the possibility of entanglement in the fence.

**Alternative 2:** Private/Public Boundary

The effects of this alternative would be similar to those of the proposed action with the exception that of the amount of fence that bighorn sheep would encounter increases near the East Rim as this proposed fence extends to the south. The route of this fence would act as funnel to the rock fence at the southern end and would make escape difficult.

## Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

Refer to Ready Pasture Proposed Actions for discussion of the effects of this fence.

## Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences

Refer to Eusabio Ridge Proposed Actions for discussion of rock fences and their effects on wildlife.

**Alternative:** Straw Hat No Livestock Grazing Boundary

This alternative would be a crossing hazard for wildlife since much of the fence route would be on steep terrain. Construction of the fence for bighorn sheep and deer passage would eliminate some impacts but not all. The impacts would be from big game trying to cross the fence while traveling uphill.

## Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence

This proposed action would have an effect on migrating elk since the location would be along a migration route to the upper part of Kiger Gorge where approximately 200 head of elk summer. This would effect cow elk with new calves as the calves would not be able to negotiate this fence design. Elk would be able to go around the end but usually go over or under a fence. Separation of calve elk from their mothers would allow for greater predation opportunities and decrease productivity of the herd.

**Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

The location of this alternative would be the same as the proposed action but would be a barbed wire fence with the bottom wire smooth and standard wire spacing. The fence would be put up before livestock entered the pasture down canyon and would be letdown after all livestock were removed. This would allow wildlife, especially cow elk with calves, to pass through this area, and not be blocked by the fence. By putting the fence down before winter snows, maintenance would be less than a standard barbed wire fence in heavy snow country. There should be no impacts to wildlife from this fence design.

Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development and  
**Alternative 1:** Gap Fences

Refer to Eusabio Ridge Proposed Actions for effects of the fences and the Miners Field Proposed Actions for effects of water developments on wildlife.

Bradeen Crossing

**Proposed Action:** Gap Fences and Waterhole and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

Refer to Eusabio Ridge Proposed Actions for effects of the fences and the Miners Field Proposed Actions for effects of water developments on wildlife.

Taber Cabin

**Proposed Action:** Waterhole Construction and **Alternative:** No Waterhole Construction

Refer to the Miners Field Proposed Actions for effects of water developments on wildlife.

Fence Removal in Wilderness and WSAs

**Proposed Action:** Fence Removal; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

The effects of the proposed action and alternatives on wildlife would be to reduce obstacles that cross summer and fall habitat for deer, bighorn sheep, pronghorn, and elk. The action of fence removal would have some short-term impacts as people are removing the fence. Small wildlife species would not be affected by this action.

#### South Steens Allotment

**Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension

Refer to Eusabio Ridge Proposed Actions for effects of the fences and the Miners Field Proposed Actions for effects of water developments on wildlife.

#### East Ridge Allotment

**Proposed Action:** No Action and **Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

The Mid-Kiger Fence is similar in impacts to the Kiger Gorge Fence alternative. Refer to this discussion for effects on wildlife. The effects of spring developments and water troughs would be to provide additional water sources in certain areas that wildlife would use. Spring enclosure fences would be designed to allow wildlife in and out without any impacts.

### 3. Livestock Management

Only the following proposed actions/alternatives would affect this element:

#### Ready Pasture

**Proposed Action:** Upper Bone Creek Gap Fence and **Alternative:** Lower Bone Creek Gap Fence; **Proposed Action:** Ready Cattleguard and **Proposed Action:** Fields Fence and Cattleguard and **Alternative:** Fields Fence and Painted Cattleguard

The combination of the above proposed actions or alternative is to keep livestock in the Ready Pasture as set out in the Act. The effect of development of reliable fencing would be to increase the flexibility and sustainable use of grazing livestock in the Ready Pasture.

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension

The effect of development of reliable water would be to increase the flexibility and sustainable use of grazing livestock in the Ready Pasture as directed in the Act.

Miners Field

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance; and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

The effect of development of reliable water and fencing would be to increase the flexibility and sustainable use of grazing livestock in the Miners Field Pasture as directed by the Act.

Fields Seeding

**Proposed Action:** Fields Seeding Pipeline

The effect of development of reliable water would be to increase the flexibility and sustainable use of grazing livestock in the Fields Seeding as directed in the Act.

O'Keefe Pasture

**Proposed Action:** O'Keefe Well and Pipeline

The effect of development of reliable water would be to increase the flexibility and sustainable use of grazing livestock in the O'Keefe Pasture as directed in the Act.

Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary, and **Alternative 2:** Private/Public Boundary

The effects of this fence would be to keep livestock out of the no livestock grazing area as directed by the Act. The fence would reduce the available forage base which is higher productivity, higher precipitation and provided for much of the summer to fall range grazed by livestock. The loss of this summer to fall range reduces the area in which to manage livestock.



It also hampers the ability to provide periodic rest, and to control timing, duration, and distribution of livestock on the remaining allotment outside of the no livestock grazing area.

#### Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

Refer to the Eusabio Ridge discussion above for the effects of this proposed action/alternative on livestock management.

#### Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

Refer to the Eusabio Ridge discussion above for the effects of this proposed action/alternative on livestock management.

#### Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

Refer to the Eusabio Ridge discussion above for the effects of this proposed action/alternative on livestock management.

#### Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development

The effects of these gap fences around the no livestock grazing area would keep livestock out of that area as directed by the Act. The water development would provide water at a trough or waterhole for livestock instead of the spring source. The spring source would be fenced to protect the source. There would be no effect on livestock management from this proposed action.

### **Alternative 1: Gap Fences**

The effects of the gap fences alone on livestock management would be the same as described for the proposed action. There would be no effect on livestock management from this alternative.

#### Bradeen Crossing

**Proposed Action:** Gap Fences and Waterhole and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

The waterhole at the Weaver place would affect livestock by providing water sources when access to water along the Donner und Blitzen Wild and Scenic River would no longer be available.

#### Taber Cabin

**Proposed Action:** Waterhole Construction

The waterholes near Taber Cabin would effect livestock by providing water sources when access to water along the Donner und Blitzen Wild and Scenic River would no longer be available.

**Alternative:** No Waterhole Construction

The water gap at Taber Cabin would no longer be available to livestock for a watering source. The nearest other water source is at Three Springs, about 2 miles to the southwest. The effect of not constructing the waterholes would be to concentrate livestock at Three Springs which would affect distribution and also the spring source as well. With limited water in this portion of the allotment, the ability to manage livestock would be reduced.

#### South Steens Allotment

**Proposed Action:** Tombstone Drift Fence RMP Analysis

This proposed action would be to provide some flexibility for livestock management by allowing the Tombstone Drift Fence to remain in place until analyzed in the proposed Andrews RMP. This would also affect livestock management in the Catlow Conservation Agreement area as discussed in the South Steens Allotment Proposed Action of the Special Status Species - Fauna section.

**Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

The projects listed for this alternative would help provide the flexibility needed to manage the range properly while providing for forage resource health by allowing periodic rest for plants to complete their life cycle. These projects would split one large pasture into two smaller pastures and provide the opportunity to rotate use and rest or defer grazing when needed. This would also affect livestock management in the Catlow Conservation Agreement area as discussed in the South Steens Allotment Proposed Action of the Special Status Species - Fauna section.

**Alternative 2:** No Action Alternative

The No Action Alternative would be to remove the temporary Tombstone Drift Fence when fire rehabilitation objectives have been met. This would remove the options for livestock management in the remaining part of the South Steens Allotment.

East Ridge Allotment

**Proposed Action:** No Action

The no action proposed action would be to continue to graze the remainder of the East Ridge Allotment with the existing pastures and water developments. This would reduce the opportunities to apply the current adaptive management which adjusts the timing of grazing to environmental factors and climatic changes. This loss of management options would further restrict timing of grazing on adjoining pastures. Management of the mid-canyon riparian area along Kiger Creek, would be shortened and during periodic rest the whole canyon would be rested which would affect options for use in other parts of the allotment. Management in the Lower Three Forks Pasture would be shortened and more difficult as livestock would move into Drake and Deep Creeks outside this pasture, and would require increased horseback supervision to maintain livestock in appropriate areas. Due to limited season long water in the Upper Ridge Pasture (west of Kiger Gorge), management options would be limited to early season use and would provide no flexibility to the timing of grazing. Livestock management would be in accordance with the Standards for Rangeland Health and Guidelines for Livestock Management.

**Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

The alternative projects would allow flexibility for livestock operations by splitting one pasture with the Mid-Kiger Fence, and developing springs to provide more reliable water for use in other pastures. The development of water would provide for livestock distribution and for ecologically sound management coordinated between public and cooperating private lands. The proposed fencing would give more control of timing frequency and duration of grazing and allow for periodic rest. These livestock structures would provide for healthy, diverse native plant communities.

#### 4. Vegetation

Only the following proposed actions/alternatives would affect this element:

Ready Pasture

**Proposed Action:** Upper Bone Creek Gap Fence and **Alternative:** Lower Bone Creek Gap Fence and Fields Fence and Cattleguard and **Alternative:** Fields Fence and Painted Cattleguard

The construction of the fences would disturb vegetation due to the trampling along the new fenceline as workers walk back and forth, but no vegetation would be cleared from the fenceline. After a period of time, trails from livestock could be evident along fencelines.

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension

The construction of a well, pipeline, and troughs would affect vegetative resources. Surface disturbance has the greatest possibility of reducing ground cover and allowing noxious weeds the opportunity to invade the disturbances, especially when in the proximity of infestations. Those areas which do not have a healthy perennial native plant community are more susceptible to invasion by noxious weeds when disturbed. Pipeline construction would be the most likely opportunity for this to happen due to the surface disturbance. Revegetation with native species or crested wheatgrass, where appropriate, would reduce the chance of noxious weed and cheatgrass invasion. The Burns District Weed Management Program would be followed to prevent the spread of noxious weeds.

## Miners Field

**Proposed Action:** Miners Field Fence, Waterholes, and Spring Maintenance; and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

Refer to the Ready Pasture discussion for the effects of the proposed and alternative fence on vegetation. Construction of waterholes would have an impact on vegetation at that site. Even though livestock would congregate at these waterholes, early grazing use would allow vegetation to regrow after livestock use and reduce the effects of livestock use.

## Fields Seeding

**Proposed Action:** Fields Seeding Pipeline

Refer to the discussion of the Ready Well and Pipeline for the effects of this action.

## O'Keefe Pasture

**Proposed Action:** O'Keefe Well and Pipeline

Refer to the discussion of the Ready Well and Pipeline for the effects of this action.

## Eusabio Ridge

**Proposed Action:** Eusabio Ridge Fence; **Alternative 1:** No Livestock Grazing Boundary, and **Alternative 2:** Private/Public Boundary

The construction of the fences would disturb the vegetation due to trampling along the new fenceline as workers walk back and forth. No vegetation will be cleared from the fenceline, so no long-term effects are anticipated from construction. After a period of time, trails from livestock may be evident along one side of the fencelines. Since this fence will keep wild horses from accessing part of the HMA that will become private land, trails would be evident on the other side of the fence. Trails may not be as noticeable in higher precipitation zones such as this area.

## Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

The construction of the fence would disturb the vegetation due to trampling along the new fenceline as workers walk back and forth. No vegetation will be cleared from the fenceline so no long-term effects are anticipated from construction. Trails from livestock may be evident along one side of the fencelines after a period of time. The timing, duration, and intensity of livestock use would determine the effect of this fence on vegetation. Livestock management would be in accordance with the Standards for Rangeland Health and Guidelines for Livestock Management.

## Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

Refer to the Wildhorse Canyon Proposed Action for the discussion of this proposed action and alternative on vegetation.

## Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

Refer to the Wildhorse Canyon Proposed Action for the discussion of this proposed action and alternative on vegetation. Since this is a narrow canyon with riparian vegetation, the timing, duration and intensity of livestock use would determine the effect of this fence on vegetation.

## Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development

Exclosure fences and gap fences would protect spring sources, riparian, and wetland vegetation and aid in recovery of the vegetation after disturbance from spring development. Gap fences would keep livestock out of the no livestock grazing area. The effect of these fences would be to improve riparian conditions at the spring sources.

### **Alternative 1: Gap Fence**

The gap fence would keep livestock out of the no livestock grazing area but there would be no protection of the spring source outside the no livestock grazing area. Livestock management would need to be in accordance with Standards for Rangeland Health and Guidelines for Livestock Management.

#### Bradeen Crossing

**Proposed Action:** Gap Fences and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

The fence would have the same effect on vegetation as discussed for Wildhorse Canyon Proposed Action. The waterhole near the Weaver place would effect vegetation by providing water for livestock, wild horses, and wildlife which would trample vegetation. The timing, duration, and intensity of livestock use would determine the effect on vegetation.

#### Taber Cabin

**Proposed Action:** Waterhole Construction

Refer to Bradeen Crossing Proposed Action for discussion of the effects of waterholes on vegetation.

#### Fence Removal in Wilderness and WSAs

**Proposed Action:** Helicopter Use; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

Fence removal in the no livestock grazing area would only have short-term impacts to the vegetation when fence wire was being rolled or posts pulled out of the ground. There would be no long-term effects on vegetation from this action.

## South Steens Allotment

### **Proposed Action:** Tombstone Drift Fence RMP Analysis

By leaving the Tombstone Drift Fence in until analysis in the proposed Andrews RMP, the effect on vegetation would be through improved livestock management and flexibility in the timing and duration of grazing.

### **Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

The projects listed for this alternative would enhance the flexibility needed to manage the range properly and to provide for forage resource health by allowing periodic rest for the plants to complete their life cycle. These projects would split one large pasture into two smaller ones and provide the opportunity to rotate use as well as to rest or defer grazing when needed. This would increase health and vigor of the vegetation. It would also affect vegetation resources in the Catlow Conservation Agreement area as discussed in the South Steens Allotment Proposed Action of the Special Status Species - Fauna section.

### **Alternative 2:** No Action Alternative

The No Action Alternative would be to remove the Temporary Tombstone Drift Fence when fire rehabilitation objectives have been met. This would remove the options for proper livestock management in the South Steens Allotment, and would affect the vegetation resource through not being able to control timing and duration of use.

## East Ridge Allotment

### **Proposed Action:** No Action

The no action proposed action would reduce the flexibility in livestock management and affect the vegetation through less opportunities for periodic rest and control of the timing and duration of livestock use.

### **Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence



Refer to the Wildhorse Canyon Proposed Action for the discussion of the effect of fences on the vegetation resource. The disturbance created by the construction of spring developments, pipelines, and troughs would affect the vegetation resource by allowing noxious weeds the opportunity to invade the disturbances. Revegetation with native species would reduce that chance of noxious weed and cheatgrass invasion. Spring sources with good riparian vegetation would recover within a year so nonnative species invasion is not a concern. Exclosure fences would be constructed around these sites to allow for quick recovery of riparian vegetation so invasion by nonnative species would not occur. Construction and placement of troughs would impact vegetation. The timing, duration, and intensity of livestock use would determine the effects of troughs on vegetation.

5. Soils

Only the following proposed actions/alternatives would affect this element:

Ready Pasture

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension

The surface-disturbing projects such as pipeline construction would disrupt soil structure and remove protective vegetation exposing the soil to wind and water erosion. The disturbed areas would be seeded after construction to reduce erosion. Along the pipelines, vegetation should grow back within a year to help protect these sites. Access routes to the well site would compact soils; however, with only occasional use, the soils would return to less compacted state.

Miners Field

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

The waterhole construction would effect soil structure through disruption and removal of vegetation. This would expose the soils to wind and water erosion until the waterhole filled. Congregation of livestock around this area would reduce ground cover and expose soils outside the original disturbance to erosion. Spring maintenance would remove vegetation from the spring source during placement of the headbox but this area would recover since water is available for vegetation regrowth. Early grazing by livestock would allow for full growth of vegetation after livestock are removed.

#### Fields Seeding

**Proposed Action:** Fields Seeding Pipeline

Refer to the Ready Pasture Proposed Action for discussion of the effects of this project.

#### O'Keefe Pasture

**Proposed Action:** O'Keefe Well and Pipeline; and **Alternative:** O'Keefe Well and Pipeline with Fields Seeding Extension

Refer to the Ready Pasture Proposed Action for discussion of the effects of this proposed action.

#### Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development

Refer to Miners Field Proposed Action for discussion of the effects of the waterhole on soils.

#### Bradeen Crossing

**Proposed Action:** Gap Fences and **Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

Refer to Miners Field Proposed Action for discussion of the effects of the waterhole on soils.

#### Taber Cabin

**Proposed Action:** Waterhole Construction

Refer to Miners Field Proposed Action for discussion of the effects of the waterhole on soils.

#### South Steens Allotment

**Proposed Action: Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole

Refer to Miners Field Proposed Action for discussion of the effects of the waterhole on soils.

#### East Ridge Allotment

**Proposed Action:** No Action

The no action proposed action for Mid-Kiger Springs and Bull Run Springs would still allow livestock access to spring sources which could disrupt soil structure and reduce the vegetative productivity of the spring source.

**Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline

The surface-disturbing projects would have an impact on soils by disrupting the soil structure and removing protective vegetation which would expose the soil to wind and water erosion. Along the pipelines, vegetation should grow back within a year and help protect these sites. Seeding these disturbed areas would aid in recovery and protection. Springs proposed for development would recover within a year after disturbance since these areas have water available and resilient vegetation, as well as fence exclosures to protect the source from livestock which would aid in recovery. The soils in areas around water troughs would probably lose all vegetation and soils would become compacted due to increased livestock use.

#### 6. Visual Resources

Only the following proposed actions/alternatives would affect this element:

## Ready Pasture

**Proposed Action:** Upper Bone Creek Gap Fence and **Alternative:** Lower Bone Creek Gap Fence

The proposed action would be constructed entirely in the wilderness area and the alternative would either be partially or wholly in the wilderness depending on final location. Fences introduce short vertical and long linear elements into the landscape, and even with metal posts without white tops, these fences would not meet Class I objectives. The placement of the Upper Bone Creek Fence would provide some topographical screening so it would not be noticeable in the landscape from most areas.

**Proposed Action:** Ready Well and Pipeline and **Alternative:** Burke Springs Pipeline Extension

This well and pipeline are in a Class II area. All aboveground features such as troughs and well heads would need to be painted to match the natural landscape so as not to attract the attention of the casual observer. There would be some screening of the aboveground features by vegetation which would break up the added circular elements.

## Miners Field

**Proposed Action:** Miners Field Fence, Cattleguard, Waterholes, and Spring Maintenance; and **Alternative 1:** Miners Field Fence ROW and **Alternative 2:** Miners Field South Fence

The portion of this fence that parallels the Fields-Folly Farm Road is in a Class II area and would introduce long linear and short vertical elements into the landscape but would not change the existing landscape form. The use of solid color fenceposts and the 300-yard setback from the road would reduce the visual impacts of this fence on the landscape, making it less visible to the casual observer.

The waterholes would be in a Class II area along the Long Hollow portion of Highway 205. Miners Waterhole 1 would be off the main road enough and in a drainage that the casual observer might not notice it. Miners Waterhole 2 would be near the road and more at road level so it would be noticeable and would not fit in with the Class II objectives.

The spring maintenance in Miners Field would occur in the wilderness which is a Class I area. Even though the project was in existence before the wilderness was designated, it does not meet with the Class I objectives. Digging up the headbox would create surface disturbance in the short term. This area would recover over the course of a year and would not be noticeable.

#### Eusabio Ridge

##### **Proposed Action:** Eusabio Ridge Fence

This proposed fence would be partially in the wilderness area depending on final placement. Those parts that are in the wilderness area would be in a Class I area, which includes the western portion and the easternmost end. This fence would introduce long linear and short vertical elements to the landscape; however, the use of solid color fenceposts would reduce impacts on the landscape. Vegetative and topographic screening of this fence would make it visible from shorter distances. Although it is noticeable, this fence would preserve the existing character but would attract attention.

##### **Alternative 1:** No Livestock Grazing Boundary

The effects of this alternative on visual resources are similar to those discussed above for the proposed Eusabio Ridge Fence. This fence would be more noticeable on the eastern end as it would be routed along the rim line for a short distance.

##### **Alternative 2:** Private/Public Boundary

The effects of this alternative on visual resources are similar to those discussed above for the proposed Eusabio Ridge Fence. This fence would be longer than the other fence alternatives and would attract attention but would be screened by vegetation.

#### Wildhorse Canyon

##### **Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

The proposed action and alternative would both be located in a Class I area and would be similar to those effects discussed for the Eusabio Ridge Fence.

#### Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

The proposed action and alternative would both be located in a Class I area and would be similar to those effects discussed for the Eusabio Ridge Proposed Action.

#### Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence

The proposed action and alternative would both be located in a Class I area and would be similar to those effects discussed for the Eusabio Ridge Fence. The main difference between the two alternatives being less noticeable from shorter distances than the proposed action.

#### Burnt Car

**Proposed Action:** Burnt Car Gap Fences and Water Development and **Alternative 1:** Gap Fence

Refer to the Eusabio Ridge Proposed Action discussion for the effects of the proposed action and alternative fence on Class I areas. The disturbance from the pipeline placement would need to be contoured and seeded to reduce the visual impacts. Although a trough would add rectangular elements to the landscapes, it or a waterhole would be screened by the vegetation and topography to reduce visual impacts.

#### Bradeen Crossing

**Proposed Action:** Gap Fences and Waterholes

Refer to the Eusabio Ridge Proposed Action discussion for the effects of the proposed action and alternative fence on Class I areas. This proposed action would be screened by topography and would not be noticeable to the casual observer. Refer to the Burnt Car Proposed Action for discussion of the effects of a waterhole on Class I areas. Seeding of the dam area would reduce the visual impacts of the waterhole.

**Alternative:** No Livestock Grazing Boundary Fence and Cattleguard

Refer to the Eusabio Ridge Proposed Action discussion for the effects of the proposed action and alternative fence on Class I areas. This would be more visible to the casual observer due to the proximity to the Steens Mountain Back Country Byway and the length. Refer to the Burnt Car discussion of the effects of a waterhole on Class I areas.

Taber Cabin

**Proposed Action:** Waterhole Construction

Refer to the Burnt Car Proposed Action for discussion of the effects of waterholes on Class I areas. Seeding of the dam areas would reduce the visual impacts of the waterholes.

**Proposed Action:** Fence Removal in Wilderness and WSAs;  
**Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

Fence removal in the no livestock grazing/wilderness area would meet Class I objectives for preserving the natural landscape by removing long linear and short vertical features.

South Steens Allotment

**Proposed Action:** Tombstone Drift Fence RMP Analysis; **Alternative 1:** Existing Temporary Tombstone Drift Fence to Remain with Extension and Black Canyon Waterhole, and **Alternative 2:** No Action Alternative

The effect of this action would be to remove the Tombstone Drift Fence within a year or two when burned area rehabilitation objectives have been met and reduce the long linear and short vertical elements in the landscape. The private fence around Bald Headed Camp would remain in place. Livestock would be more scattered across a larger landscape and would be around water sources longer.

East Ridge Allotment

**Proposed Action:** No Action, and **Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Developments, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

All of these projects are within a Class II area. The use of solid color fenceposts would reduce the visual impacts but would introduce long linear and short vertical elements to the landscape. The Mid-Kiger Spring developments would not be noticeable except from short distances as there would be substantial vegetative and topographical screening. The troughs would add rectangular elements in the landscape but would be painted to blend in. The Bull Run Pipeline would be contoured to predisturbance levels and seeded with native species to reduce visual impacts. The trough would be painted to blend in with the landscape. Some screening from vegetation and topography would make this project visible only from short distances.

## 7. Recreation

Only the following proposed actions/alternatives would affect this element:

### Wildhorse Canyon

**Proposed Action:** Wildhorse Lower Fence and **Alternative:** Wildhorse Upper Fence

Though the location of these fences is different, the impacts to recreationists would be expected to be the same as they would be minor impediment for hikers, hunters, and other recreational users. The fences would be designed to allow hikers and others foot access while excluding livestock access. Gates would be installed in fences to allow recreational horse use access to land inside the no livestock grazing area.

### Straw Hat Pass

**Proposed Action:** Straw Hat Gap Fences and **Alternative:** Straw Hat No Livestock Grazing Boundary

The location and length of these new fences are different, but impacts to recreationists would be the same as fences would be minor impediment for hikers, hunters, and other recreational users. Refer to the Wildhorse Canyon discussion for the effects of this action.

### Kiger Gorge

**Proposed Action:** No Livestock Grazing Boundary - Wood Weave Fence and **Alternative:** No Livestock Grazing Boundary - Letdown Wire Fence



The location of the proposed action and the alternative are the same so the impacts to recreationists are expected to be the same. Refer to the Wildhorse Canyon discussion for the effects of this action.

#### Fence Removal in Wilderness and WSAs

**Proposed Action:** Helicopter Use; **Alternative 1:** Full Mechanized Removal, and **Alternative 2:** Pack Horse Use

The proposed action and alternatives are expected to have the same effect on recreationists. This project would allow recreationists in the no livestock grazing area the opportunity to move about without having to cross fences, except for the boundary fences.

#### East Ridge Allotment

**Proposed Action:** No Action, and **Alternative:** Mid-Kiger Fence, Mid-Kiger Spring Development, Bull Run Spring Development and Pipeline, Lower Three Forks Fence

This would be a new fence in a location that would be a minor impediment for hikers, hunters, and other recreational users in accessing parts of Kiger Gorge. Since this would be a pasture division fence, gates would be installed for livestock movements and would facilitate hikers and horse users access to other parts of Kiger Gorge.

#### C. Reasonably Foreseeable Future Actions

Although no other projects are being considered at this time, the addition of other gap fences where livestock are continually accessing the no livestock grazing area is possible. The amount and placement of these fences is not known at this time. Also, the removal of more fences than already known in the wilderness area and WSAs is a possibility as these fences are identified. Processes for removal of these newly-identified fences will follow acceptable procedures analyzed through minimum tool analysis.

### CHAPTER V. CUMULATIVE IMPACTS

All resources discussed in the Affected Environment and Environmental Consequences sections are evaluated for cumulative impacts.

#### A. Critical Elements

1. ACECs

There would be no increased cumulative impacts on this resource as a result of any proposed actions or alternatives.

2. Cultural Resources

There would be no increased cumulative impacts on this resource as a result of any proposed actions or alternatives.

3. Floodplains

There could be cumulative impacts on this resource from riparian area improvement, as a result of some of the proposed actions or alternatives.

4. Migratory Birds

There could be cumulative impacts on this resource from habitat improvement, as a result of enactment of some of the proposed actions or alternatives.

5. Noxious Weeds

The known noxious weed locations in the proposed project areas, combined with the ground disturbance of some of the projects and the ground disturbance in new areas could have potential to create favorable conditions for the invasion and expansion of noxious weeds and other undesirable plants. However, survey for, and treatment of, infestations before project construction, and yearly monitoring of these project sites would reduce the possible spread of noxious weeds and therefore reduce cumulative impacts. As a result of implementation of the Burns District Weed Management Program, it is anticipated there would be no increase in the cumulative effects as a result of the proposed action and alternatives.

6. Special Status Species - Fauna

There would be no increased cumulative impacts on this resource, as a result of the proposed actions or alternatives.

7. Special Status Species - Flora

There would be no increased cumulative impacts on this resource. as a result of the proposed actions or alternatives.

8. Water Quality

Past effects on water quality have resulted from livestock grazing along flowing water sources in the Steens Mountain Area. Even though livestock grazing continues along some waterways in the Steens Mountain Area, water quality is not being degraded further. As a result of enactment of the proposed actions or any alternatives, there would be no additional cumulative effects on water quality.

9. Wetland and Riparian Zones

Wetland and riparian zones in the no livestock grazing area could show improvement over time even though wild horses would still have access to some of the area. Spring areas where developments are proposed would improve since exclosures are proposed, shutoff valves would be installed near the headbox and float valves would be installed on water troughs to keep as much water as possible at the spring source. Cumulative effects could result from improvement and maintenance of riparian and wetland habitat.

10. Wild and Scenic Rivers

As a result of the proposed actions facilitating the establishment of the no livestock grazing area, Wild and Scenic Rivers could show ORV improvement (See Environmental Consequences IV. 10). The cumulative effects could result from proposed projects which could improve and maintain values associated with Wild and Scenic Rivers.

11. Wilderness and WSAs

Although proposed projects, near or along the no livestock grazing boundary, would add to existing humanmade structures in parts of the wilderness and WSAs, the overall cumulative effect of the removal of about 55 miles of fence could contribute to a more natural, open feeling in the wilderness area. This could provide for more opportunities for solitude and unconfined recreation. Overall, most supplemental values would not be cumulatively affected and the Steens Mountain Wilderness would provide increased opportunities for primitive and unconfined recreation.

B. Noncritical Elements

1. Wild Horses

Through implementation of the proposed actions/alternatives, horses could move more freely through the no livestock grazing area and have increased availability of water within the HMA. Also, the wild horses would have increased access to forage and water with no competition from livestock. Implementation of the proposed actions or alternatives could cumulatively contribute to healthy and sustainable horse populations.

2. Wildlife

The cumulative impacts of all the projects on wildlife would result from an overall reduction in the amount of fences. As a result of proposed water developments, there would be an increase in the amount of available water and cover for wildlife. Implementation of the proposed actions or alternatives could cumulatively contribute to improved habitat conditions for wildlife.

3. Livestock Management

Livestock management would benefit from implementation of the proposed projects including establishment and sustainable use of replacement forage. New water developments would be beneficial to livestock operations by allowing for improved distribution of the livestock. Fencing would allow better control and more flexibility in moving livestock, thereby aiding in proper use and rest for different areas. This would help in maintaining healthy rangelands and the productivity of the area. Implementation of the proposed actions/alternatives could cumulatively contribute to improved conditions for livestock.

4. Vegetation

Improved livestock management, due to fencing and water projects, could cumulatively impact vegetation by improving or maintaining rangeland health. There would be some localized impacts around waterholes and water troughs but upland and riparian vegetation condition could improve.

5. Soils

Due to improvements in rangeland health, through implementation of the proposed actions, soil stabilization, and decrease in erosion would cumulatively affect soil resources.

6. Visual Resources

Past actions in the cumulative impacts area contributing to visual impacts include roads, campgrounds, signs, range developments, cabins, commercial developments, vegetation treatments, and radio tower facilities. As a result of the addition of 25 new miles of fence, construction of water developments and removal of 55 miles of existing fence, there would be no substantial increase in cumulative effects on visual resources.

7. Recreation

As a result of the overall reduction of fences in the no livestock grazing area and wilderness, there would be less restriction on access and movement by recreationists. The proposed actions/alternatives would not substantially increase the cumulative effects on recreational opportunities.

## CHAPTER VI. CONSULTATION AND COORDINATION

Audubon Society of Portland  
Burns Paiute Tribe  
Central Oregon Audubon Society  
Defenders of Wildlife  
Rod and Cindy Hoagland  
Native Plant Society  
Oregon Department of Fish and Wildlife  
Oregon Natural Desert Association  
Oregon Natural Resource Council  
Oregon Trout  
Fred Otley  
Roaring Springs Ranch, Inc.  
Sierra Club High Desert Committee  
Southeast Oregon Regional Advisory Committee  
Stafford Ranches

## CHAPTER VII. LIST OF PREPARERS

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Carolyn Chad, Range Management Specialist  
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Gary Foulkes, Planning and Environmental Coordinator  
Terri Geisler, Geologist  
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Kelly Hazen, GIS Mapping Specialist  
Rhonda Karges, Management Support Specialist  
Tim Kramer, Watershed Specialist  
Brian McCabe, Archaeologist  
Matt Obradovich, Project Lead, Wildlife Biologist  
Lesley Richman, Weed Specialist  
Jeff Rose, Fire Ecologist  
Scott Thomas, Archaeologist  
Evelyn Treiman, Outdoor Recreation Planner  
Cynthia Weston, Fish Biologist

## APPENDIX A

### Locations of the Projects

#### Off-Site Forage, Water, and Fencing Needs

##### Ready Pasture

Pipeline/Trough - T.37S., R.33E., sec. 4, 8, 9, 17, 20, and 29  
Cattleguard - T.36S., R.33E., sec. 16/21  
Bone Creek Gap Fence - T.36S., R.33E., sec. 20  
Fields Fence - T.38S., R.34E., sec. 13 and 23/24  
Cattleguard - T.38S., R.34E., sec. 13

##### Fields Seeding

Pipeline/Troughs - T.38S., R.34E., sec. 14, 15, 22, and 23

##### Miners Field

Fence - T.37S., R.32 $\frac{3}{4}$ E., sec. 36; T.37S., R.33E., sec. 17, 20, 29, 30, and 31  
Cattleguard - T.37S., R.32 $\frac{3}{4}$ E., sec. 36  
Waterholes - T.37S., R.32 $\frac{3}{4}$ E., sec. 16 and 22  
Spring Maintenance - T.37S., R.32 $\frac{3}{4}$ E., sec. 13

##### O'Keefe Pasture

Pipeline/Troughs - T.37S., R.32 $\frac{3}{4}$ E., sec. 27, 28, 34, and 35; T.38S., R.34E., sec. 16  
Well - T.37S., R.32 $\frac{3}{4}$ E., sec. 34

#### Fencing and Water Needs Along/Near the No Livestock Grazing Area

##### Eusabio Ridge

Fence - T.35S., R.32 $\frac{3}{4}$ E., Sec. 7-11, 13, 14, 24, and 25;  
T.35S., R.33E., sec. 8

##### Wildhorse Canyon

Fence - T.34S., R.33E., sec. 33 and 34/35

##### Straw Hat Pass

Fence - T.34S., R.33E., sec. 12, 13, 14, and 23/26

##### Kiger Gorge

Fence - T.32S., R.33E., sec. 26 and 27

##### Burnt Car

Fence - T.33S., R.32 $\frac{1}{2}$ E., sec. 9, 10/15  
Spring - T.33S., R.32 $\frac{1}{2}$ E., sec. 15  
Pipeline/Trough - T.33S., R.32 $\frac{1}{2}$ E., sec. 15

##### Bradeen Crossing

Gap Fence - T.34S., R.32 $\frac{1}{2}$ E., sec. 12  
Weaver Place Waterhole - T.34S., R.32 $\frac{1}{2}$ E., sec. 9

#### Taber Cabin

Waterholes - T.34S., R.32 $\frac{3}{4}$ E., sec. 20 and 29

#### Livestock Management Projects

##### South Steens

Tombstone Drift Fence - T.33S., R.32 $\frac{1}{2}$ E., sec. 31, 32, 33, and 34; T.33S., R.32E., sec. 36  
Tombstone Fence Extension - T.33S., R.32E., sec. 26, 27, 28, 35, and 36  
Black Canyon Waterhole - T.33S., R.32E., sec. 27

##### East Ridge

Mid-Kiger Fence - T.31S., R.34E., sec. 18/19  
Mid-Kiger Springs 1 and 2 Development - T.31S., R.34E., sec. 18 and 19  
Bull Run Spring Development - T.31S., R.33E., sec. 2  
Bull Run Pipeline/Trough - T.30S., R.34E., sec. 31; T.31S., R.33E., sec. 2  
Lower Three Forks Fence - T.30 $\frac{1}{2}$ S., R.34E., sec. 30

## APPENDIX B

### References

South Steens Allotment Management Plan and Environmental Assessment - EA OR-026-93-015

South Steens Wild Horse Gathering Environmental Assessment - EA OR-026-98-027

Lauserica Fence Environmental Assessment - EA OR-026-98-033

Dry Creek Fire Emergency Fire Rehabilitation Plan and Environmental Assessment -  
EA OR-026-98-036

Long Hollow Summit Fire Emergency Fire Rehabilitation Plan and Environmental Assessment -  
EA OR-026-99-044

Stonehouse Allotment Management Plan and Environmental Assessment - EA OR-026-99-47

Alvord Peak Fire Rehabilitation Plan and Environmental Assessment - EA OR-026-00-83

Draft Southeastern Oregon Resource Management Plan/Environmental Impact Statement -



## APPENDIX C

### List of Special Status Species

#### Endangered, Threatened, Proposed, Candidate

Borax Lake chub *Gila boraxobius* (E)  
Columbia spotted frog *Rana luteiventris* (C)  
Lahontan cutthroat trout *Oncorhynchus clarki henshawi* (T)  
Northern bald eagle *Haliaeetus leucocephalus* (T)

#### Sensitive Wildlife and Fish

Alvord chub *Gila alvordensis*  
Catlow Valley redband trout *Oncorhynchus mykiss* ssp.  
Catlow Valley tui chub *Gila bicolor* ssp.  
Ferruginous hawk *Buteo regalis*  
Flammulated owl *Otus flammeolus*  
Greater sage grouse *Centrocercus urophasianus*  
Inland redband trout *Oncorhynchus mykiss* ssp.  
Kit fox *Vulpes velox* (State T)  
Loggerhead shrike *Lanius ludovicianus*  
Malheur mottled sculpin *Cottus bairdi* ssp.  
Northern goshawk *Accipiter gentilis*  
Peregrine falcon *Falco peregrinus* ssp. (State E)  
Sage sparrow *Amphispiza belli*  
Snowy plover *Chararius alexandrinus nivosus* (State T)  
Spotted bat *Euderma maculatum*  
Townsend's big-eared bat *Corynorhinus townsendii* ssp.  
Vesper sparrow *Poocetes gramineus affinis*  
Western burrowing owl *Athene cunicularia*  
Wolverine *Gulo gulo* (State T)  
Yellow-billed cuckoo *Coccyzus americanus*

#### Sensitive Plants

Alvord milkvetch *Astragalus alvordensis*  
Back's sedge *Carex backii*  
desert chaenactis *Chaenactis xantiana*  
large-flowered chaenactis *Chaenactis macrantha*  
least rush *Juncus hemiendytus* var. *abjectus*  
Malheur cryptantha *Cryptantha propria*  
naked stemmed phacelia *Phacelia gymnoclada*  
prickly poppy *Argemone munita* ssp. *rotundata*  
Raven's lomatium *Lomatium ravenii*  
Steens Mountain paintbrush *Castilleja pilosa* var. *steenensis*

E= listed Federal Endangered

T= listed Federal Threatened

C= Candidate for Federal listing

State E= State of Oregon Endangered

State T= State of Oregon Threatened

## APPENDIX D

### Visual Resource Management (VRM) Class Objectives

The Federal Land Policy and Management Act (FLPMA) of 1976 requires the Bureau of Land Management (BLM) to consider the effects of management actions on the visual quality of the landscape. To protect visual resources, all public land is inventoried to determine its VRM classification. The VRM objectives for each of four possible classifications are described below.

**Class I**—The objective of this classification is to preserve the existing character of the landscape. This class provides for natural ecological changes, and it allows limited management activity. The level of change should be very low and must not attract attention. Class I is assigned to those areas where a management decision has been made to preserve a natural landscape. This includes areas such as wilderness, the wild sections of National Wild and Scenic Rivers, and other Congressionally and administratively designated areas.

**Class II**—The objective of this classification is to retain the existing character of the landscape. The level of change to landscape characteristics should be low. Management activities may be seen but should not attract the attention of a casual observer. Any changes must conform to the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

**Class III**—The objective of Class III is to partially retain the existing character of the landscape. Moderate levels of change are acceptable. Management activities may attract attention but should not dominate the view of a casual observer. Changes should conform to the basic elements of the predominant natural features of the characteristic landscape.

**Class IV**—The objective of Class IV is to provide for management activities that require major modification of the landscape. These management activities may dominate the view and become the focus of viewer attention. However, every effort should be made to minimize the impact of these projects by carefully locating activities, minimizing disturbance, and designing the projects to conform to the characteristic landscape.

## APPENDIX E

### Minimum Tool Analysis

Minimum tool analysis is a two-step process contained in the *Minimum Requirement Decision Guide*, which was developed with input from the National Park Service, Bureau of Land Management, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the Arthur Carhart National Wilderness Training Center. It provides a flow chart and worksheet to analyze proposed projects, look at alternatives to the proposed action, analyze the effects on wilderness character, determine the minimum tool to accomplish the project or if the proposed project needs to be accomplished in the wilderness area. An appendix with each agencies policy relating to minimum tool is included in the back of this guide.

## Minimum Tool Determination for Fence Construction in Wilderness

Common to both alternatives:

Fences would be constructed on Eusabio Ridge, Wildhorse Canyon, Straw Hat Pass, Kiger Gorge No Livestock Grazing Boundary, Burnt Car, and Bradeen Crossing.

Fences will be constructed of either barbed wire/smooth wire and metal posts, rocks or wood depending on location, snow conditions, and other resource concerns.

Workers building these fences would hike or ride horses to access fence construction sites in the wilderness.

Protection of the resources in the no livestock grazing area is the main purpose of these fences as directed by the Steens Mountain Cooperative Management and Protection Act.

There will disturbance in the area of the fence construction that will affect the recreationists' experience through the noise from pounding fenceposts or other work as well as from workers in the area. These fences will also pose a barrier along the edge as well as in the wilderness area even though they will be designed to allow recreationists through.

Alternative 1: Helicopter use to move materials to fence construction sites.

This alternative would not be very economical but would move materials into a remote site along Eusabio Ridge and other areas in a more timely manner. This may be a consideration along Eusabio Ridge if access across private land for construction cannot be obtained. With helicopter use, there would be more disturbance when the helicopter was in use to move materials to the fence sites. This would affect recreationists in the area by reducing the feeling of being alone in a vast area.

Alternative 2: Horse use to move materials to fence construction sites.

This alternative may not be economical either and may not be timely if construction of fences in remote areas has to be done quickly. This method would be best on smaller fences where not much material needs to be moved long distances. Use of horses to move materials to the fence sites would seem more natural in the wilderness setting and would not affect the recreationists experience in the wilderness.

Fence building along No Livestock grazing boundary  
in wilderness area

①

(This flow chart will help you assess whether the project is the minimum required action for administration of the area as wilderness. Answering these questions will help determine IF this action is really the minimum required action in wilderness. Additional sheets may be necessary for explanations to questions.)

Is this an emergency? (ie. a situation that involves an inescapable urgency and temporary need for speed beyond that available by primitive means, such as fire suppression, health and safety of people, law enforcement efforts involving serious crime or fugitive pursuit, retrieval of the deceased or an immediate aircraft accident investigation.)

**Explain:**

Document rationale for line officer approval using the minimum tool form and proceed with action.

Does the project or activity conflict with the stated wilderness goals, objectives, and desired future conditions of applicable legislation, policy and management plans?

**Explain:**

Do not proceed with the proposed project or activity.

Are there other less intrusive actions that should be tried first? (Such as signing, visitor education, or information.

**Explain:**

Implement other actions using the appropriate process.

Can this project or activity be accomplished outside of wilderness and still achieve its objectives? (Such as some group events.)

**Explain:**

Proceed with action outside of wilderness using the appropriate process.

Explain: Most areas are along wilderness/USA boundaries

Is this project or activity subject to a valid existing rights? (Such as a mining claim or right-of-way easement.)

**Explain:**

Proceed to minimum tool section  
of this document.

Is there a special provision in legislation (the 1964 Wilderness Act or subsequent wilderness legislation), that allows this project or activity? (For example, maintenance of dams and water storage facilities with motorized equipment and mechanical transport or control of fire, insects and disease.)

**Explain:**

The proposed project or activity should be considered but is not necessarily required just because it is mentioned in legislation.

to meet minimum requirements for administration of the area which is also no livestock grazing area. Fence construction meets that requirement.

4

## WORKSHEETS

## STEP 1 - DETERMINING THE MINIMUM REQUIREMENT (a two-part process)

### PART A - Minimum Requirement Key to making a determination on wilderness management proposals

(This flow chart will help you assess whether the project is the minimum required action for administration of the area as wilderness. Answering these questions will help determine **IF** this action is really the **minimum required** action in wilderness. Additional sheets may be necessary for explanations to questions.)

## GUIDING QUESTIONS

<p>Is this an emergency? (ie. a situation that involves an inescapable urgency and temporary need for speed beyond that available by primitive means, such as fire suppression, health and safety of people, law enforcement efforts involving serious crime or fugitive pursuit, retrieval of the deceased or an immediate aircraft accident investigation.)</p> <p><b>YES</b> ↓ Document rationale for line officer approval using the minimum tool form and proceed with action.</p> <p><b>NO</b> ↓</p>	<p>Answer: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain: _____</p>
<p>Does the project or activity conflict with the stated wilderness goals, objectives, and desired future conditions of applicable legislation, policy and management plans?</p> <p><b>YES</b> ↓ Do not proceed with the proposed project or activity.</p> <p><b>NO</b> ↓</p>	<p>Answer: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain: _____</p>
<p>Are there other less intrusive actions that should be tried first? (Such as signing, visitor education, or information.)</p> <p><b>YES</b> ↓ Implement other actions using the appropriate process.</p> <p><b>NO</b> ↓</p>	<p>Answer: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain: _____</p>
<p>Can this project or activity be accomplished outside of wilderness and still achieve its objectives? (Such as some group events.)</p> <p><b>YES</b> ↓ Proceed with action outside of wilderness using the appropriate process.</p> <p><b>NO</b> ↓</p>	<p>Answer: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain: _____</p>
<p>Is this project or activity subject to a valid existing rights? (Such as a mining claim or right-of-way easement.)</p> <p><b>YES</b> ↓ Proceed to minimum tool section of this document.</p> <p><b>NO</b> ↓</p>	<p>Answer: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain: _____</p>
<p>Is there a special provision in legislation (the 1964 Wilderness Act or subsequent wilderness legislation), that <u>allows</u> this project or activity? (For example, maintenance of dams and water storage facilities with motorized equipment and mechanical transport or control of fire, insects and disease.)</p> <p><b>YES</b> ↓ The proposed project or activity should be considered but is not necessarily required just because it is mentioned in legislation.</p> <p><b>NO</b> ↓</p>	<p>Answer: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain: _____</p>
<p>Proceed to Part B. Responsive Questions Section.</p>	

Fence Removal

(2)

## PART B - Determining the Minimum Requirement

**Responsive Questions for Minimum Requirements Analysis:** Explain your answer in the response column. If your responses indicate potential adverse affects to wilderness character, evaluate whether or not you should proceed with this proposal. If you decide to proceed, begin developing plans to mitigate impacts, and complete the Minimum Tool Analysis in this guide. Some of the following questions may not apply to your proposed project or activity.

EFFECTS ON WILDERNESS CHARACTER	RESPONSE
How does the project or activity benefit the wilderness as a whole as opposed to maximizing one resource?	Fence removal would enhance the wilderness area by removing barriers to foot or horse travel and to large wildlife found in the wilderness area.
If this project/activity were not completed, what would be the beneficial and detrimental effects to the wilderness resources?	Would be no beneficial effects. Detrimental effects would be signs of man's work and lost opportunity for primitive and unconfined recreation. Loss of naturalness. Loss of some wilderness character due to disturbance when removing fence.
How would the project or activity help ensure that human presence is kept to a minimum and that the area is affected primarily by the forces of nature rather than being manipulated by humans?	Removal of fences removes signs of human presence.
How would the project or activity ensure that the wilderness provides outstanding opportunities for solitude or a primitive and unconfined type of recreation? (e.g. does the project or activity contribute to people's sense that they are in a remote place with opportunities for self-discovery, adventure, quietness, connection with nature, freedom, etc.)	Removal of fences would contribute to all aspects mentioned - Would be some loss of naturalness during the removal work.
<b>MANAGEMENT SITUATION</b>	
What does your management plan, policy, and legislation say to support proceeding with this project?	No management plan for wilderness area yet.
How did you consider wilderness values over convenience, comfort, political, economic or commercial values while evaluating this project or activity?	Removal of fences is not economical no matter what method employed. It would be more convenient not to remove fences.
SHOULD WE PROCEED?	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> <b>YES</b> Go to Step 2         </div> <div> <b>NO</b> Stop         </div> </div>

See Chapter II (C) in EA for development of ~~the~~ proposed action and Alternatives. See Chapter II (A)(ii) for the effects of this project on wilderness values. 5

